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# COMMERCIAL AIR TRANSPORTATION IN THE UNION OF SOVIET SOCIALIST REPUBLICS

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AS the years proceed, progressively less information becomes available from the Soviet Union concerning the development of its air transportation. In examining the material that has been released during the past five decades, much confusion arises in the initial attempts to piece this material together chronologically and realistically show how the development of air transportation in the Union of Soviet Socialist Republics has proceeded. Meager official material is available from the U.S.S.R., and the confusion arises primarily from the masses of material containing rumors, unverified and unreliable reports, and tainted or incorrect reports, and the various articles which evidently refer to the same topic by different nomenclatures and sometimes with different chronological order.[1]

* The author is presently preparing a text to present the chronological development of the aeronautical industry in the Soviet Union and to briefly examine the capabilities and potentialities that seem likely in the near future. This paper is, essentially the chapter from this book which is concerned with the development and future potentialities of civil aviation in the Soviet Union.

[1] This paper is based primarily on the existing material that has been released for publication in one form or another. At the time of this writing there are only five books (in the English language) concerning aeronautics within the Soviet Union, though articles and papers are numerous. Of the five books, *Jane's All the World's Aircraft* (annual) perhaps contains the most general reliable data; *The Soviet Air Force* by Asher Lee is an excellent source of information concerning the Soviet military air power through 1948; and Cain's and Voaden's *Military Aircraft of the U.S.S.R.* serves its purpose as a pamphlet for aircraft identification. Molokov's *Soviet Civil Aviation*, while published in Moscow for propaganda purposes, contains data which seems to be reliable — though care should be taken in the interpretation of the contents. *The Story of Soviet Aviation* by Craven is an excellent literary example of a publication by a pro-Soviet Communist or Communist group outside of the Union of Soviet Socialist Republics. Articles of this nature are frequently encountered, and they do not, as is usually the case with official releases from the Soviet Union, only cloud the precise meaning of the data but present erroneous and distorted facts as well.

Four basic problems presented themselves as a prerequisite to the preparation

## Development of U.S.S.R. Airlines

After the Revolution, Lenin had been convinced almost immediately of the importance of aviation to the future of the Soviet Union. It was imperative that commercial air transport facilities be initiated and expanded throughout the country in order to maintain adequate communications and unification of the territory which consisted of one-sixth of the land mass of the earth. In Czarist Russia, the Trans-Siberian Railroad was the only link between Western (European) Russia and the vast territorial expanses east of the Urals. Even in Western Russia rivers provided much of the necessary commercial transportation media, and many of these waterways were unnavigable and frozen during the greater part of the year; it was only during the few summer months that goods could be transported safely over the northern water routes. Trucks and automobiles were almost non-existent in the early twenties, and to this day the Soviet road and highway system has remained considerably underdeveloped. It may be safely stated that when the Bolsheviks assumed authority in the U.S.S.R., the majority of the means of communication and transportation were crude and primitive, and the facilities were in an embryonic state of development.

### *The "Deruluft" Company*

The first commercial airline company to be established in the Soviet Union was the "Deruluft"[2] Company, which was a jointly-owned Soviet-German company. This company was formed in November, 1921, and was supposedly based on equality. The supreme governing body was a "Board of Inspection," composed of an equal number of members of the two nations. There were two managers, one German and one Russian, and one half of the flying staff as well as the mechanics were supposed[3] to have come from each country. On May 1, 1922, the first commercial aerial traffic was inaugurated with plane service between Moscow and Konigsberg, and a connecting all-German flight from Konigsberg to Berlin. During 1922, there were two round-trip flights per week over this route, and by 1924, there were six round-trip flights operated weekly. In June, 1928, an additional line was created, connecting Leningrad with Tallin and Riga; and the further development of the "Deruluft" Company rapidly progressed. It may be added, however, that this company was amazingly reliable; in 1926, the service was operated to within 99.6 percent of its schedule, and during the course

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of this manuscript. These were, in their respective order: (1) The initial research and the collection of all the available material pertaining to the Soviet aircraft industry; (2) The critical examination or process of sifting this material in order to separate the reliable and "seemingly" valid material from the apparently erroneous and distorted material; (3) The unification and piecing of this material together, and its comparison to similar data concerning aeronautical development in other countries; (4) The future projection of the development of civil aviation in the Soviet Union.

[2] Deutsch-Russoische Luftverkehrs-Gesellschaft.

[3] Though the personnel and management were theoretically based on equality, during the early stages of operation the company's personnel consisted almost entirely of Germans.

of 518 flights during that year, the "Deruluft" Company carried over 1,100 passengers and a total of 123,469 kilograms of luggage, goods, and newspapers.

The concession granted to the "Deruluft" Company in 1921 ended on October 31, 1926. The "Council of People's Commissaries" ("Sovnarkon") then ratified a new agreement[4] which was valid until December 31, 1931, and after that date it was to be automatically prolonged until steps were taken by either party to the contrary. In 1936, when the diplomatic relations between Germany and the Soviet Union became strained, this company was dissolved.

A regulation was issued by the Soviet "Council of Labor and Defense"[5] on February 9, 1923, stating:

> 1. The general technical control of the airlines existing within the Soviet Union and those airlines which will be established in the future are temporarily entrusted to the "General Administration of the Red Air Fleet," the actual work to be carried out by the Inspectorate of Civil Aviation. Under "technical control" are included the classification of the types of aircraft and their equipment, the use of airdromes and hangers, rules of the air, regulations regarding the use of radio, signaling, log books, and other documents, and technical personnel.
>
> 2. The "Civil Aviation Council," which is responsible to the "General Administration of the Red Air Fleet," shall have control over the regulations concerning the opening of new airlines and to their operation. This Council will be assisted by the various departments such as the postal and telegraph organs.

This arrangement was stated as being temporary, and when commercial aviation in the Soviet Union had become more fully developed, a special department governing civil aeronautics was anticipated.

### *The "Dobrolet" Company*

The first all-Russian commercial airline to be established was the "Dobrolet" Company.[6] In March of 1923, Krasnostchekoff, chairman of the "Russian Mercantile Trading Bank," was responsible for the foundation of this company. The initial capital was 500,000 gold roubles but within a few months it had been increased to over 2,000,000 gold roubles, due to the enthusiastic support of the populace. The "Dobrolet" Company was organized along the same lines as the "Russian Volunteer Mercantile Fleet," and the government agreed to initial support and subsidization until it became self-supporting. The first several months after the initial organization were spent by a technical commission engaged in studying and examining the various centers and possible air-routes. As a result of this investigation, the air services

[4] Under the new agreement the "Deruluft" Company was to carry out a regular service, six days per week from May 1 to October 1, between Moscow and Berlin. Each of the governments (German and Soviet) further agreed to pay a subsidy of 110,000 dollars to the company for the period covered by the agreement.

[5] See the 1924 issue of *Jane's All the World's Aircraft.*

[6] The "Dobrolet" Comapny is also referred to as the "All-Union Joint-Stock Company of the Volunteer Air Fleet" or the "Russian Voluntary Air Fleet Company."

were centered about Moscow, and the initial route, Moscow to Kazan, was opened in 1924. Within a very short time this company abandoned the concept of Moscow to serve as their "air center" and soon changed their centers of operation to the frontier routes in the republics of Central Asia and Siberia. Almost immediately this company became an important carrier of mail and valuable freight. Previously, the mail and freight had been carried by camels, horses, or water vessels, and the time for such transportation of goods was reduced from a matter of days to a matter of hours with the advent of new air-routes east of the Urals. The "Dobrolet" Company continued to progress and expand until it was absorbed by the "Dobroflot" Company in 1930.

*The "Ukrvozdukhput" Company*

In 1923, the "Ukrvozdukhput"[7] Company was also formed, and after a brief organizing period its first lines were in operation between Kharkov and Kiev and Kharkov and Odessa. This company's air centers were in the Ukraine and Crimean regions, and even before any air routes had been established the "Civil Aviation Council" had appropriated 140,000 gold roubles to be utilized for the construction of concrete hangers at the Kharkov and Kiev airdromes. In 1925, the "Ukrvozdukhput" Company absorbed the "Zakavia" Company and then continued to expand until it was absorbed by the "Dobroflot" Company in 1930.

*The "Zakavia" Company*

The "Zakavia"[8] Company was established in July, 1923, with an initial capital of 500,000 gold roubles. Its object was to establish a trans-Caucasian airline and in 1924, its first air service was in operation, from Tiflis to Baku. This company had a short-lived independent existence as it was apparently absorbed by the "Ukrvozdukhput" Company during 1925.

*The "Junkers" Company*

Shortly after the revolution, the German "Junkers" Company established a branch factory (to produce aircraft) in Moscow. Many of the early commercial planes utilized by the Soviet airline companies were manufactured by this firm. In 1923, the "Junkers" Company concluded an agreement with the Soviet government whereby they would establish an airline service between Sweden, the Soviet Union, and Persia (Iran). Toward the end of 1924, this company was operating regular flights from Baku to Enzeli to Teheran. It is difficult to present the exact date of the termination of this company's air services, but it is apparent that its commercial air transport activities had ceased by 1930, at which time it was probably absorbed by the "Dobroflot" Company.

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[7] The "Ukrvozdukhput" Company is also referred to as the "Ukrainian Aerial Traffic Comany" or the "Ukrkrima Aviation and Air Traffic Company."

[8] The "Zakavia" Company is also referred to as the "Trans-Caucasian Air Traffic Company."

### *The "Dobroflot" Company*

In 1929 and 1930, the "Dobroflot"[9] Company was established under the first Five-Year Plan of the Soviet regime. The "Dobroflot" Company was a government-owned organization and it was charged with the general development of civil aviation in the Soviet Union. Upon its organization, this company absorbed all the existing all-Soviet airline companies. In 1932, the "Dobroflot" Company was dissolved and all the commercial air services were reorganized under the "Chief Administration of the Civil Air Fleet."

### *"Transaviatsia"*

Further development and the growing importance of aviation in the Soviet Union caused the creation, in 1932, of the "Chief Administration of the Civil Air Fleet," attached to the "Council of People's Commissaries"; this Administration assumed complete control over civil aviation. "Transaviatsia" was also formed in 1932; this organization was the practical body under the "Chief Administration of the Civil Air Fleet" and it was concerned with the practical operation of the air services previously operated by the "Dobroflot" Company.

### *"Aeroflot"*

In 1934, a resolution by the "Council of People's Commissaries" abolished "Transaviatsia" and at the same time reorganized the "Chief Administration of the Civil Air Fleet," which is referred to as "Aeroflot." The principal change was that twelve subordinate territorial administrations were established as follows:

(1) The Moscow Regional Management; (2) The Ukraine Regional Management; (3) The Azov-Black Sea Regional Management; (4) The Trans-Caucasus Regional Management; (5) The Caucasus Regional Management; (6) The Central Asia Regional Management; (7) The Ural Regional Management; (8) The Volga Regional Management; (9) The Western Siberia Regional Management; (10) The Eastern Siberia Regional Management; (11) The Far East Regional Management; (12) The North Regional Management.

Each of these territorial administrations had a manager, who was put in charge of the operation of the air routes within his management, which had previously been operated by "Transaviatsia." A resolution of May 19, 1934, further defined the responsibilities of the "Chief Administration of the Civil Air Fleet" as including the direction of operations of the civil air fleet, the administration of air routes, the projection of new air routes, the establishment and operation of air navigation facilities, the technical supervision and inspection of aeronautical personnel, aircraft, and aviation facilities, aviation training, and aeronautical research.

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[9] The "Dobroflot" Company is also referred to as the "All-Union Combine of the Civil Air Fleet."

A code which became effective on August 7, 1935, denoted to the "Chief Administration of the Civil Air Fleet" supervisory control over all civil aviation in the Soviet Union, including air mail and aeronautical signaling devices. The Administration received the authority to fix the rates for the transportation of passengers, baggage, cargo, and mail as well as to regulate the charges for the utilization of the ground facilities. Aside from those air services operated by the "Chief Administration of the Northern Sea Routes," regular airlines were limited to the services operated by "Aeroflot" and even the ownership of aircraft by individuals or other state organizations was subject to permission from the "Chief Administration of the Civil Air Fleet."

The "Chief Administration of the Civil Air Fleet" has remained as the authoritative body concerning the administration and operation of civil aeronautics in the Soviet Union and today it occupies virtually a cabinet position.

### *"Glawsewmorputj"*

In 1933, the "Administration of the Northern Sea Routes,"[10] which is referred to as "Glawsewmorputj," was established with the primary objective of developing the northern sea routes to facilitate ship passage through the Arctic Ocean from the Atlantic to the Pacific Ocean. Within a very short time this Administration became extremely important as an air transport service for the distant gold fields, fisheries, and fur trading stations. It was not long before it was actively engaged in Arctic exploration, surveying, ice floe reconnaissance, and meteorological studies. The first Arctic airlines followed the great Siberian rivers in a north-south direction, but since the end of 1935 other lines running east-west have been established. Many isolated weather stations and northern settlements are, even today, completely dependent upon the air transportation facilities of this organization, and such facilities provide their only contact with the remainder of the Soviet Union.

The "Administration of the Northern Sea Routes" has been continually expanded and developed and today it is essentially a parallel organization to the "Chief Administration of the Civil Air Fleet."

### International and Joint Airline Companies

"Aeroflot" has, from time to time, had extensions of its operations into foreign territories, but by and large, it has been primarily concerned with the development of the air services within the Soviet territories. As has been discussed earlier, the first air service in the Soviet Union consisted of a joint Soviet-German organization, the "Deruluft" Company, which operated on the principle of "equality." This airline was also the first international airline in the Soviet Union.

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[10] The "Administration of the Northern Sea Routes" is also referred to as the "Northern Directorate," "Glawsewmorputj," "Glavmorput," or "Aviaarktika."

In 1939, a jointly owned Sino-Soviet airline company, "Hamiata,"[11] was formed on similar principles of the earlier "Deruluft" Company. The first services were in operation during 1939, in a route extending from Alma Ata (in Soviet Turkestan) to Hami (in the Sinkiang Province of China). This organization is still in operation and it has been extended since the Communists have taken over the authority in China proper.

A joint Hungarian-Soviet airline company, the "Maszovlet,"[12] was established and in operation in 1946. This company's air routes connect Budapest with Moscow and both of these cities with the other European centers.

The "TARS,"[13] a joint Rumanian-Soviet airline company, was also formed in 1946. Via this line, Bucharest and Moscow are connected to the other nearby centers.

In 1947, a joint Yugoslavian-Soviet airline company, the "JUSTA,"[14] was formed and put into operation, connecting Belgrade with Moscow. It is believed that this company ceased operations as a joint company soon after the Yugoslav-Soviet diplomatic relations began to deteriorate.

At the present time, for all practical purposes, the Soviet Union also controls Poland's "LOT"[15] and Czechoslovakia's "CSA,"[16] as well as the air communications in both Bulgaria and Albania. Thus, it can be seen that the present airline company organization under the authority of the Soviet Union extends well into Eastern and Central Europe, where the airlines of the Western European and American countries make connections with those of the satellite nations.

## Aircraft and Other Facilities of the Civil Air Fleet

Since the aircraft industry within the Soviet Union was almost non-existent during the early stages of commercial air transport development, most of the first airplanes were of foreign design and imported into the U.S.S.R. Such craft as produced by "de Havilland," "Vickers-Vimy," and "Junkers" were initially used by the "Dobrolet" Company. During the first six months of 1924, the Soviets purchased about 700 modern (at that time) aircraft from Holland and Italy.

It was not long before the Soviets had begun to develop their own aircraft industry and in 1932, they were producing the "Kalinin K-5," which was a commercial, ten-seat, single-engine monoplane. This plane went into service on the Soviet airlines early in 1933, and proved to be one of the first successful commercial planes of Soviet design. The A.N.T.-series, designed by Tupolov; the K-series, designed by Kalinin; and the Stal-series designed by Bartini and Poutilov, were the most

[11] "Hamiata" is also referred to as the "Sino-Soviet Aviation Corporation."
[12] "Magyar-Szoviet Legiforgalm Tarsasag."
[13] "Transporturi Aeriene Romano Sovietice."
[14] "Jugoslovenska Sovjet Transport Aviacija."
[15] "Polskie Linie Lotnicze."
[16] "Ceskosslovenske Aerolinie."

widely utilized commercial airplanes until the outbreak of the second world war.

After the war, the main type of aircraft on the Soviet airlines was the Soviet version of the American "Dakota" (DC-3); this was a twin-engine, 27-32 seat passenger and freight airliner, designated as the PS-84. At present (1952), the civil air transport fleet consists of over 300 aircraft, primarily Il-12's, PS-84's, ShchE-2's, and Yak-16's. The Il-18, a four-engine transport similar in appearance to the Il-12, is also coming into wide use for the long-distance, trans-continental flights.

Airdromes, hangers, emergency camps, and signaling systems underwent a rapid expansion at the outset of commercial aeronautical development. By 1935, all the main airports had waiting rooms for passengers, information bureaus, postal and telegraph offices, restaurants, and ticket offices. The commercial pilots and technical personnel are now trained with modern facilities and the calibre of today's Soviet commercial pilot is roughly equivalent to that of the present commercial pilot in Great Britain or the United States.

### *Lighter-than-Air Craft*

It is a point of interest that the Soviet Union was the only country which, before World War II, maintained a regular airline using lighter-than-air craft.[17] This air service consisted of semi-rigid DP-9 airships which connected Moscow with Sverdlovsk, in the Urals. Similarly, lighter-than-air craft have been frequently utilized in the Arctic services.

A non-rigid dirigible (similar to the Goodyear G or L type), the "Pobyeda" ("Victory"), was in use for civil air transportation in 1946, shortly after the war. Another airship, the "Patriot," was completed in 1946. This latter airship is believed to have been a passenger carrier with accommodations for ten to twelve passengers.

## Commercial Air Transportation Development

The extreme importance of air transportation to the Soviet union can be demonstrated by a table taken from an article by V. A. Zarzar, General Manager of the Civil Aviation of the U.S.S.R., which appeared in a 1929 issue of *L'Aviazione,* an Italian aeronautical magazine. This table shows the time saved by aerial flights in comparison with all other means of transportation which existed in the mentioned places in 1929:

| *Route* | *Time via Air Traffic* | *Time via Other Means of Transportation* |
|---|---|---|
| Tashkent - Dyushambe ..... | 10 hours | 5-7 days |
| Frunze - Alma Ata ..... | 2 hours | 30-40 hours |
| Tashkent - Kabul ..... | 1 day | 30 days |
| Irkutsk - Yakutsk ..... | 2-4 days | 18 days (summer)<br>30 days (winter) |
| Moscow - Irkutsk ..... | 36 hours | 5-6 days |

[17] Before the war, the "Tsiolkovsky Dirigible Construction School," at Moscow, was the center of dirigible work in the U.S.S.R. Besides the construction of dirigibles, this school conducted advanced training for dirigible personnel.

Aside from such cases as exhibited in the table, air facilities have provided the ability to settle new territories and regions that would otherwise not be possible. The importance of aeronautics within the Soviet Union can not be underestimated!

The Aeronautical activities in the U.S.S.R., like the rest of its industrial activities, are the result of a planned economic development program. It is difficult to make an accurate comparison between such a development and the development that would have resulted from a natural growth in a free economy, but some comparisons shall be attempted.

A table of Soviet civil air transport data has been compiled from what has been considered the most reliable available sources;[18] this table is presented below and consists of statistical data concerning the total air route length, the number of passengers carried, the weight of mail carried, and the weight of freight carried in the Soviet Union for the various years. These statistical data have been plotted as a function of time on semi-logarithmic paper, the year 1946 coinciding with the year 1940 to obliterate the effect of the second world war, during which time the civil air transportation facilities were attached to the armed forces. From such plots, the amazing regularity of the data and small deviation of the data from the fitted curves are immediately observed. The result of a planned economy is evidenced by the fact that there are no irregularities and eruptions such as are demonstrated by the depressions and other whimsical occurrences in the similar data for such countries as the United States or Great Britain.[19]

Though the commercial aeronautical development has been far more spasmodic in the countries based upon a free economy, it is appropriate to point out that, though ambitious aeronautical programs have been designed in the Five-Year Plans, such programs are rarely achieved. The tables on page 137 present the aeronautical goals and results of the first Five-Year Plan.

Although 116 percent of the anticipated total route length was realized, nothing was stated concerning the frequency and regularity of the flights over these additional routes. By 1933, it appeared that the flights were spasmodic and were carried out only during the daylight hours and summer months of the year in many regions. Further evidence of the irregularity can be noted by the achievement of only 33 percent of the planned total plane distance covered. Though the total

[18] These sources include *American Aviation, Aviation Age, Aviatsiia i Khimiia* (Aviation and Chemistry), *L'Aviazione* (Aviation), *C.A.B. Statistics for Selected World Air Carriers, Grazhdanskaia Aviatsia* (Civil Aviation), *Jane's All the World's Aircraft, Khimiia i Oborona* (Chemistry and Defense), *Pravda*, (Truth), *Samolet* (Plane), *Soviet Civil Aviation* (By V. Molokov), and the *World Aviation Annual.*

[19] Of course it is possible that all the data that has been released from the Soviet Union has been erroneous and prearranged. Such a concept would be substantiated if similar feeling existed concerning the other industrial data which has been released. To carry out such a program of releasing prearranged, erroneous data concerning the industrial development of the Soviet Union would require a tremendous force and would be an extreme effort for the government of any country. Though such extreme efforts are indeed possible in the U.S.S.R., it does not seem likely that such a program has been carried out.

SOVIET CIVIL AIR TRANSPORT DATA

| Year | Total U.S.S.R. Air-Route Length (kms.) | Air-Passengers Carried in the U.S.S.R. (thousands) | Air-Mail Carried in the U.S.S.R. (metric tons) | Air-Freight Carried in the U.S.S.R. (metric tons) | Total Goods (Mail and Freight) Carried by Air in the U.S.S.R. (metric tons) |
|---|---|---|---|---|---|
| 1922 | 1,200 | .3 | | | 13.8 |
| 1923 | 1,610 | 1.4 | | | 27.9 |
| 1924 | 4,400 | 2.6 | | | 48.3 |
| 1925 | 4,984 | 3.9 | | | 76.8 |
| 1926 | 6,392 | 4.0 | | | 84.6 |
| 1927 | 7,022 | 7.1 | | | 170.4 |
| 1928 | 11,971 | 9.0 | | | 228.7 |
| 1929 | 18,442 | 12.8 | | | 340.7 |
| 1930 | | 17.8 | 130 | 150 | 280 |
| 1931 | | 23.0 | 363 | 250 | 613 |
| 1932 | 31,830 | 27.2 | 481 | 500 | 981 |
| 1933 | 53,182 | 41.6 | 1,920 | 987 | 2,907 |
| 1934 | 68,050 | 65.0 | 3,359 | 4,703 | 8,062 |
| 1935 | 77,088 | 111.0 | 6,500 | 10,200 | 16,700 |
| 1936 | 96,004 | 165.0 | 7,900 | 35,000 | 42,900 |
| 1937 | 104,006 | 211.0 | 10,079 | 40,320 | 50,399 |
| 1938 | 116,005 | 292.7 | 11,983 | 50,960 | 62,943 |
| 1939 | 135,007 | 307.0 | 12,899 | 44,413 | 57,312 |
| 1940 | 142,007 | 358.7 | 14,300 | 45,620 | 59,920 |
| 1941 - 1944* | | | | | |
| 1945 | | 624.6 | | 72,700 | |
| 1946** | | 1,100 | | | |
| 1947 | 150,000 | 1,500 | | 109,000 | |
| 1948 | 175,000 | | | | |
| 1949 | 221,000 | | | | |
| 1950 | 241,000 | | | 218,000 | |
| 1951 | | | | | |
| 1952 | | | | | |

* No data is available for this period. During the "Great Patriotic War" (World War II), the entire Soviet Civil Air Fleet was devoted to military operations.
** The U.S.S.R.'s post-war civil aviation statistical progress is overshadowed. Almost all of the post-war data is expressed in terms of percentage growth from an undisclosed base figure.

weight of goods carried was 85.6 percent of the planned figure, these goods must have been transported at the expense of limiting the total number of passengers to be carried. To realize the lack of fulfillment of the First Five-Year Plan, it might also be added that at the time of the presentation of this plan, it was stated that the anticipated figures were regarded as the minimum figures. It was also proposed that, within the first five-year period, the main airlines of the Soviet Union would be working throughout the year, with daily flights, night and day. In 1933, there was a decided scarcity of night-flying facilities and only the major airports had signal beacons and landing light equipment. In 1950, only two scheduled flights per week were operated by "Aeroflot" between Moscow and the far eastern cities such as Khabarovsk and Vladivostok, and before October 1947, these flights were not flown with any regularity. Only a few seats were available for passengers, the rest of the plane being utilized for cargo, and until May of 1948 the flights to the far eastern regions operated only during the daylight hours.

Although the presentation of the First Five-Year Plan was the presentation of the "extreme," the following Five-Year Plans having been more fully achieved, it adequately demonstrated the "super-ambitions"

THE ANTICIPATIONS OF THE FIRST FIVE-YEAR PLAN

| Year | *Total Route Length (kms.)* | *Thousands of Passengers Carried* | *Total Metric Tons of Goods Carried* | *Total Plane Distance Covered (kms.)* |
|---|---|---|---|---|
| 1928-29 | 18,442 | 12.8 | 340.7 | 4,399,944 |
| 1929-30 | 26,262 | 30.0 | 837.9 | 9,252,608 |
| 1930-31 | 31,342 | 51.7 | 1,560.0 | 12,766,520 |
| 1931-32 | 41,513 | 72.2 | 2,141.8 | 17,709,320 |
| 1932-33 | 45,893 | 110.2 | 3,381.8 | 28,235,640 |

THE RESULTS OF THE FIRST FIVE-YEAR PLAN

| | | | | |
|---|---|---|---|---|
| 1929 | 18,442 | 12.8 | 340.7 | 4,399,944 |
| 1930 | | 17.8 | 280 | 5,900,000 |
| 1931 | | 23.0 | 613 | 7,000,000 |
| 1932 | 31,830 | 27.2 | 981 | |
| 1933 | 51,182 | 41.6 | 2,907 | 9,304,000 |

THE RESULTS AS A PERCENTAGE OF THE ANTICIPATION OF THE FIRST FIVE-YEAR PLAN

| | | | | |
|---|---|---|---|---|
| 1929 | 100.0% | 100.0% | 100.0% | 100.0% |
| 1930 | | 59.3 | 33.4 | 63.8 |
| 1931 | | 44.5 | 39.3 | 54.9 |
| 1932 | 76.5 | 37.7 | 45.8 | |
| 1933 | 116.0 | 37.8 | 85.7 | 33.0 |

concerning the aeronautical development in the Soviet Union. It also cannot be denied that remarkable commercial aeronautical developments have taken place under the Soviets in the U.S.S.R. and it seems unlikely that such expansion would have occurred had the society been based upon a free economy.[20]

The development of commercial air transportation can best be shown by the data in the table of "Soviet Civil Air Transport Data." If the data in this table are accepted, it is not difficult to carry the projection of these figures into the immediate future, as well as the present (where the data is absent). If this is done, it can be seen that, in 1952, the total U.S.S.R. air route length was about 270,000 kilometers, about 8,000,000 passengers were carried by the Soviet airlines, approximately 325,000 metric tons of freight and 23,000 metric tons of mail or 348,000 metric tons of goods were transported by the Soviet airlines, and about 185,000,000 kilometers were covered by the planes of the commercial air fleet. Projecting into the future, the following data is obtained:

| Year | *Total Route Length (kms.)* | *Thousands of Passengers Carried* | *Total Metric Tons of Goods Carried* | *Total Plane Distance Covered (kms.)* |
|---|---|---|---|---|
| 1952 | 270,000 | 8,000 | 348,000 | 185,000,000 |
| 1954 | 305,000 | 15,400 | 465,000 | 225,000,000 |
| 1956 | 335,000 | 30,500 | 585,000 | 270,000,000 |
| 1958 | 365,000 | 61,000 | 735,000 | 310,000,000 |
| 1960 | 390,000 | 115,000 | 880,000 | 345,000,000 |

Similar data for some of the pre-war years are:

| | | | | |
|---|---|---|---|---|
| 1922 | 1,200 | 0.3 | 13.8 | 137,000 |
| 1926 | 6,392 | 4.0 | 84.6 | 1,313,130 |
| 1932 | 31,830 | 27.2 | 981 | |
| 1936 | 96,004 | 165.0 | 42,900 | 35,200,000 |
| 1940 | 142,007 | 358.7 | 59,920 | |

[20] It can also be definitely stated that there is no justification for some of the shorter air routes in the Soviet Union, from an economic standpoint as well as that of efficiency, and such routes would be short-lived in a country based upon a free economy.

Thus, if the accuracy of this data is accepted, the total route length in 1952 was 190 percent of the pre-war (1940) total route length, 848 percent of the 1932 total route length, and 22,500 percent of the total route length in 1922. Furthermore, the total route length for 1952 is expected to be increased by an additional 24.0 percent by 1956 and by 44.5 percent by 1960.

Similarly, the number of passengers carried in 1952 was 2,230 percent of the number of pre-war (1940) passengers carried and 29,400 percent of the number of passengers carried in 1932. The number of passengers carried in 1952 is expected to increase by an additional 281 percent by 1956 and by 1,340 percent by 1960.

In 1952, the total weight of goods transported was 580 percent of the pre-war (1940) figure, 35,500 percent of the 1932 figure, and 2,520,000 percent of the total weight of goods transported by air in 1922. The total weight of goods transported by air is expected to increase by an additional 68.3 percent by 1956 and by 153 percent by 1960.

The total plane distance flown, in 1952, was about 230 percent of the pre-war plane distance flown. This figure is expected to increase by about 46 percent by 1956 and 87 percent by 1960.

The Soviet authorities seem to have a full realization of the importance of commercial aeronautical development and air transportation has been found indispensable in the organization and administration of the vast expanses of the U.S.S.R. The tremendous distances between the various centers and regions of the Soviet Union emphasize the benefits which may be reaped from a highly developed system of air transportation. This is magnified by the absence of a highly developed system of roads and railways, which might otherwise provide competition for the airways in some regions.

### Comparison With U.S. Domestic Airlines

It is appropriate, perhaps, to compare the Soviet air transportation developments with those exhibited by the U.S. domestic airlines. In 1951, the passenger fares on the Soviet commercial airlines ranged from 6.5 cents per mile, for the long hauls, to 8.5 cents per mile, on the shorter hauls, at the then prevalent official rate of exchange. In the same year, the passenger fares on the U.S. domestic airlines ranged from 5.6 cents per mile, for first-class service, to 4.5 cents per mile for air-coach service.

The time-rates of increase of air passengers carried and total plane distance flown have been far greater in the United States than in the Soviet Union. In 1925, the number of passengers carried by the Soviet airlines and the number of passengers carried by the U.S. domestic airlines were about equal. By 1930, the Soviet airlines carried 17,800 passengers as compared to 375,000 passengers carried by the U.S. domestic airlines. During the "great depression" the number of passen-

gers carried by the U.S. domestic airlines remained fairly constant, while the number carried by the Soviet airlines continued to increase. In 1934, the Soviet airlines carried 65,000 passengers in comparison to 462,000 passengers carried by the U.S. airlines. By 1947, about 1,500,000 passengers were carried by the Soviet airlines; the comparable figure for the U.S. domestic services was 13,189,000. Similar figures could be given for the total plane distance flown.

### *Pioneers in Air Freight*

It is an established fact that the Soviets were the undisputed "pioneers" in the transportation of air freight. As recently as 1938, the Soviet airlines carried 50,960 metric tons of freight as compared to 3,330 metric tons carried by the U.S. domestic airlines. Though, before World War II, the Soviet Union was far ahead of the United States with respect to the quantity of freight transported by air, by 1946, the weight of air freight carried by each country's airlines was almost equal.

The total U.S.S.R. air route length is apparently greater than the total air route length of the domestic airlines within the United States. But it must be remembered that many air operations within the Soviet Union are spasmodic, and the frequency and regularity of the Soviet flights are but a fraction of those existing in the United States. As was earlier pointed out, there is little justification for many of the shorter air routes in the Soviet Union and such routes would be short-lived in a country based upon a free economy.

Many theories can be advanced concerning the underlying causes of the greater time-rates of aeronautical development in the United States as compared to those of the Soviet Union. The most outstanding cause, of course, has been the much greater industrialization of the United States as compared to that which existed in the Soviet Union. During the war, the civil airline facilities of the U.S.S.R. ceased to exist as an independent unit, so that their development in 1946 was approximately equivalent to their development in 1940. During this period, the civil airlines in the United States were not disrupted to the extent of that experienced by the Soviet airlines, and the U.S. domestic airlines continued to expand. Most of the inherent qualities of the economic systems affect the time-rates of aeronautical development in one direction or another. The pre-planning of a system should theoretically enable an increased time-rate (*as compared to the same unit based upon a free economy*); at the same time such limitations as those concerning the freedom of movement of the populace contribute toward decreasing time-rates of development.[21]

[21] The author would like to express his sincere appreciation to Prof. George P. Baker of the Harvard Graduate School of Business Administration for his initial review of the subject material. The author would also like to thank Mrs. Ruth (Sanborn) King and Miss Eileen M. Fitzgerald of the George F. Baker Library, Harvard Graduate School of Business Administration, for their invaluable aid in locating and making available much of the historical and source material concerning civil aeronautics in the Soviet Union.

# THE ANOMALY OF THE CIVIL AERONAUTICS BOARD IN AMERICAN GOVERNMENT

By Harold A. Jones

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THE Civil Aeronautics Board is a recently created anomaly in our American social and political system. Our whole American social and political philosophy, and our social and political institutions, have been posited largely on the *fear* of a too strong state, and a *belief* in a maximum of personal freedom for the individual American. The requisite for this maximum personal freedom, as Robin Williams[1] points out, is a political structure based on: (1) The dispersion (separation) of the power of Government; and (2) The limitation of both public and private power.

The purpose of this article is to present this problem, to propose an approach to its solution, and to ask a few questions. No attempt is made to offer a solution.

The anomaly is that, pressed by the expediency of wartime, depression emergencies, and the almost unbelievable expansion of Government, we have, during the past 30 years, created so-called independent Government commissions which unite in *one* Government agency the three powers of government — legislative, executive and judicial, with little limitation of public power, but almost complete limitation of private power within the scope of the particular commissions' activities and contrary to our long established basic political and institutional philosophy and practice. This is the nub of the problem. It is not a problem of the reorganization of the executive, or any other Governmental department. It is a problem particularly within the realm of social science and the more narrow field of political science. It is a bedrock problem.

## There Is Something Wrong With the Independent Regulatory Commission

It must be granted that the independent regulatory commission has become an important part of the machinery of government. As Justice Jackson said, in his opinion in *Wong Yang Sung* v. *McGrath*:[2]

[1] American Society, Robin M. Williams, Jr. (Knopf, 1951).

[2] *Wong Yang Sung* v. *McGrath*, 339 U.S. 33; 70 S. Ct. 445; 94 L. Ed. 616 (1950).

> **"Multiplication of Federal Administrative Agencies, and expansion of their functions to include adjudications which have serious impact upon private rights has been one of the dramatic developments of the past half century."**

Admittedly, also, there is something wrong with the independent regulatory commissions.[3] In the past ten years more than a dozen committees or boards, appointed either by Congress or by the Executive, have turned critical eyes upon the performances of these commissions, and have found that none of them were functioning in the manner wholly expected or intended.[4] Some thirty bills were introduced in Congress between 1933 and 1946 intended to reform Administrative Procedure and Practice alone.[5]

Government reorganization plans, principally relating to the 100 major Federal agencies exercising delegated powers, but including the independent regulatory commissions, have been presented by each Administration for the past 25 years, culminating in the "Hoover Report" of 1949.[6]

The very volume of these studies, reports, and the proposed legislation resulting from them, indicates the pressing importance of the problem and that something must be done about it.

## The Civil Aeronautics Board — A Guinea Pig

Obviously, the nine listed independent regulatory commissions cannot be examined in one short article. The Civil Aeronautics Board is chosen because: (a) It is the youngest of the commissions; (b) The Act creating it[7] was supposed to be the ultimate in such legislation, giving greatly more power and wider discretion than ever before given to a regulatory agency; and great expectations were held for this "new deal" in regulatory commissions.[8]

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[3] The nine Commissions are: Interstate Commerce Commission, Federal Power Commission, Federal Trade Commission, U. S. Maritime Commission (Transferred to Department of Commerce, 1950), Securities & Exchange Commission, Federal Communications Commission, Civil Aeronautics Board, Federal Reserve Board, National Labor Relations Board.

[4] A few of the reports by these "Investigating bodies" were: 1941 Report of the Attorney General's Committee on Administrative Procedure; Hatch Committee, 79 Cong. 1 Sess.; Investigation of Executive Agencies of the Government, S. Rept. 1275, 75 Cong. 1 Sess. (1937); Report of Committee of Three under Transportation Act of 1940 "Practices & Procedures of Govt. Control." H. Doc. 678, 78 Cong. 2 Sess (1944); "Survival in the Air Age," Report by the President's Air Policy Commission, Jan. 1, 1948; A Report to Congress—The Commission on Organization of the Executive Branch of the Govt. (Hoover Report), 1949.

[5] For excellent chronological chart, see Federal Administrative Law, Laverty (West Publishing Co.—1952), page 4.

[6] See note 4, *supra;* see also Federal Administrative Law, Laverty (West Publishing Co.), pp. 373-382.

[7] Civil Aeronautics Act of 1938, 49 U.S.C. §402; 52 Stat. 977.

[8] "Patterned in some respects as to Administrative setup on the provisions of the ill-fated (Brownlow) Reorganization Plan, drafted by the draftsman of the Brownlow Committee which formulated that Plan, the Act is expected to be the 'guinea pig' in an effort to work out a scheme whereby the President, in spite of the Humphrey's decision, can exercise control over executive functions of Administrative Agencies exercising quasi-legislative and quasi-judicial functions.

"We thus have a 'New Deal' in Administrative Agencies . . . Just how well

This new "model" agency was supposed to comply with (or perhaps circumvent) the Supreme Court decision in the *Morgan* cases[9] and the *Humphrey's* case.[10] What is wrong with it (if there is anything wrong) should be easy to discover, since there has been little patchwork done on it in the 14 years of its existence and its record of experience is long enough to show up weaknesses. Also, it has been subjected to more investigations in the last 6 years than any other commission.

Above all, the social and political atmosphere existing at the time of the enactment of this particular Act is very important and must always be kept in mind.

Prior to the passage of the Civil Aeronautics Act and the later "new deal" regulatory legislation, regulatory commissions were not paternalistic. They were not regarded as planning adjuncts to the State, nor as agencies formed for the purpose of operating State controlled activities. The Interstate Commerce Commission, the Federal Power Commission, and the Federal Trade Commission were essentially "thou shall not" commissions. Congress created them to correct very real and existing abuses and to prevent the future happening of similar abuses harmful to the public welfare. Their duties were pretty well defined and limited by the abuses they were expected to correct. However, the later "new deal" commissions, such as the Federal Communications Commission and the Civil Aeronautics Board, were paternalistic in concept. They were supposed to operate, promote, aid, reward, and control, as well as to punish and prevent abuses — all in the name of the public welfare.

The 3 years of hearings on the Civil Aeronautics Act (1935 - 1938) was a period of political and social State planning. State enterprise plans took precedent over private rights and private enterprise. Industry was suspect. It should be recalled that the battle cry of the "new deal" administration in the 1938 elections was — "we planned it that way!"

## Certain Principles of American Government

No extended examination of our American society, its political institutions and Government, shall be attempted here. For a common understanding of the discussion to come, however, it will be necessary to set forth certain principles which have been established for a long time and accepted by the American people.

Government, like everything else in life, is an evolutionary process. Principles of government are evolved by trial and error. Hundreds of

this new Administrative plan will work remains to be seen from experience, as no plan like it had been put into operation by the Federal Government before the Authority began to function." Federal Aeronautics Act Annotated. Pyne, pp. 83-84. (The author was emphasizing the role of administration By Executive Order *part* of the executive functions were transferred to the Commerce Department in 1940.)

[9] *Morgan* vs. U.S. 298, U.S. 468 (1936); 304 U.S. 1 (1937); *U.S.* vs. *Morgan*, 307 U.S. 183 (1938); 313 U.S. 409 (1940).

[10] *Humphrey's Exec.* vs. *U.S.* 295 *U.S.* 602 (1935).

principles, devices, and institutions are tried out by a society over a period of, say, fifty, one hundred, two hundred, or a thousand years. Those that really work out over a long period of time survive and are accepted as basic principles – until something else comes along which works better. No society or nation is going to voluntarily abandon a working principle for some untried theory. Certainly, the new theory, in times of economic stress, war emergency, or other human crisis, will be given a try; but if it doesn't work a lot better, it will be discarded when the crisis is over.

The tried principle and untried variation go along side by side until one or the other *proves* to be the fitter by popular conviction.[11]

The principles of American Government hereinafter set forth have survived and worked very well during our brief national life. They may not be perfect, but until some other principle or device comes along which works better over a sufficient period of time, I believe we will hold on to them.

### *Separation of Powers*

The dispersal and separation of the power of government into three branches – the legislative, executive and judicial, is not a new device. It is as old as society itself, but probably more emphasis has been placed on this principle (or device) by our American society than by any other modern society. This is probably due to the fact that we Americans have had greater fear of a powerful central government and greater appreciation of individual freedom – and the corollary, i.e., the least dependency on a powerful state, and the greater opportunity to achieve individual freedom.

There is no such thing as an absolute principle of society or of government. Not even the "right to life." A drafted man in Korea has no right to life. The principle of the separation of powers is no exception. The Constitution made no attempt to establish a *complete* separation of powers. In fact it set up a system of checks and balances contradicting the *absolute* right of either of the three departments to solely and exclusively exercise the powers allocated to it.

Examples are the Chief Executive's veto power; his power to introduce legislation and to hand out patronage, etc.

The legislative branch checks the executive powers of the President by its appropriation power, approval of Presidential appointments and treaties, etc. The judiciary check both other branches. It may withhold approval of legislation departing from the Constitution or traditional principles, or the acts of a President (such as the recent steel plant seizure order) which are capricious and arbitrary.

However, this system of checks and balances does not change the fact that, until very recently, the legislative, executive, and judicial

[11] The Forgotten Man and Other Essays, William G. Sumner; Brass Tacks, A. C. Keller (Knopf), 1938; Science of Society, William G. Sumner and A. C. Keller, New Haven, 1927.

powers were separate, and performed separately – except within well defined limits. The principle has had the strong backing of public conviction. I believe it still has wholehearted popular support. Witness, for example, the Steel Plant Seizure order, and likewise the attempt to pack the Supreme Court by President Franklin D. Roosevelt in order to carry out certain "new deal" planned programs.

This is a good place to bring out the effect of wars and internal economic crises on the evolutionary process. The basic motives which compel men to form a society in the first place are to keep alive, to propagate, and to better life conditions. Spencer called these basic motives the permanancies of any society. Take away any one and there is no society. But the individual members of society are willing to modify for the time being their most cherished beliefs under certain conditions. Patrick Henry's cry of "Give me liberty or give me death" is good oratory; but, faced with the choice, an overwhelming majority of Americans are willing to give up temporarily a pretty large part of their cherished liberty.

The thing to which they surrender some part of their liberty, or freedom, is the State or Central Government – the thing American society has most feared. However, when a Hitler threatens, or economic disaster seems to threaten, the public reluctantly submits to plans which take powers away from the legislative branch and the judicial branch, and lodge them with the executive branch. During these periods we have war powers and emergency powers. "War Production Boards," and "Blue Eagles," new deals, and fair deals.

When the crisis is over the American people revalue these emergency programs against the background of their fundamental philosophy – the fear of statism, and their belief in the maximal freedom of the individual. And it is this process which is going on now. And it is against this background that we are examining the powers and functions granted to the Civil Aeronautics Board and other so-called independent regulatory commissions, because most of them came into being during these past twenty years marked by economic crisis, World War, and the unprecedented growth of a central government to cope with the situation.

This growth of the central Government, and the concomitant mushrooming of administrative agencies within the departments of the executive branch and the creation of so-called independent commissions exercising executive, legislative, and judicial powers, does not mean that American society has abandoned its fear of big government or its belief in the separation of powers. It merely signifies that the evolutionary process has not caught up with the crisis born expansion of the executive branch of Government. The American people still fear a too powerful state, and still believe in a maximal freedom for the individual. They still hold that: (1) The division, separation, and dispersal of power between the Executive, Congress, and the Judiciary;

and (2) The limitation of both public and private power, it requisite to an American system of government.[12]

### *Limited Power of Congress to Delegate Legislative Authority*

The power of Congress to delegate legislative authority to independent commissions or the executive branch of the Government is limited. The limit, I think, was well stated by Chief Justice Marshall long ago. "A general provision may be made," said Marshall, referring to legislation enacted by Congress, "and power given to those who are to act under such general provisions to *fill up the details.*"[13] (Emphasis added.

Congress may not, in other words, avoid or shirk its duty and responsibility to decide what is in the public interest by delegating that power to the executive branch or an independent commission.

This principle of American Government is, of course, closely akin, or part of, the principle of the separation of powers. It grows out of the same fears and hopes. It is found in the belief of the people that Congress is more of the people, closer to the people, and better fitted to decide what is in the public interest than the Executive, or a commission appointed by the Executive.

The difficulty arises, of course, when these questions are asked: What is a "general provision" of legislation? What is a legislative detail?

At one end of the scale there is a broad zone which clearly is not a "detail" zone. On the other end of the scale is another zone which clearly is a "detail" zone. In between there is a rather narrow, hazy, overlapping zone where these questions may arise.

### *Reasonable Predictability of Commissions Actions*

A third working principle of American Government is that the law delegating powers to a department of Government or commission should be of such nature that those who are to act under it may, or must, apply known principles and reasoning so that there will be reasonable predictability as to the outcome.

The background of this principle is the Common Law, and the rule of *stare decisis.*

> "I cannot believe that any person who at all values the judicial process or distinguishes its method and philosophy from those of the political and legislative process would abandon or substantially impair the rule of *stare decisis.* Unless the assumption is substantially true that cases will be disposed of by application of known principles and previously disclosed courses of reasoning, our common-law process would become *the most intolerable kind of ex post facto judicial law making.* Moderation in change is all that

[12] American Society, *supra*, pp. 262-264.
[13] *Wayman* vs. *Southead* (1825) 10 Wheat. 1; 6 L. Ed. 253.

> makes judicial participation in the evolution of the law tolerable. Either judges must be fettered to mere application of a legislative code with a minimum of discretion, as in continental systems, or they must formulate and adhere to some voluntary principles that will impart stability and predictability to judicial discretion.
>
> "The first essential of a lasting precedent is that the court or the majority that promulgates it be fully committed to its principle. That means such individual study of its background and antecedents, its draftsmanship and effects that at least when it is announced it represents not a mere acquiescence but a conviction of those who support it. When that thoroughness and conviction are lacking, a new case, presenting a different aspect or throwing a new light, results in overruling or in some other escape from it, that is equally unsettling to the law."[14]

It cannot be argued that the rule of *stare decisis* be absolute. In fact in administrative law it must be reasonably adaptable or the rule will defeat the purpose. But a provision in an Act which a quasi-judicial board or quasi-legislative board is called upon to interpret must be subject to disposal by the application of *some known principles and previously disclosed courses of reasoning,* or we sacrifice to administrative expedience our judicial or legislative process and submit to "the most intolerable kind of *ex post facto* judicial law making."

The doctrine of *stare decisis and predictability* is not confined to the judicial process. The members of the American society also expect the legislative branch and the executive branch to do justice, and to follow known principles. The methods and philosophy may differ, but unless these principles are followed by Congress, or by the Executive, the electorate will see that a new set of Congressmen or a new President will be elected to carry out the principles established by public conviction.

The above applies equally to an independent regulatory commission, especially one dealing with private rights. If by trial and error over a period of time it appears that an agency is incapable of the application of known principles backed by public conviction in the disposal of a matter before it – either judicial, legislative, or executive, then the public will either abolish the agency or see that Congress enacts a law correcting the situation. *The members of American society must have reasonable predictability from its Government.* It will not long stand for *ex post facto* law making by an agency of Government, be it a department or a commission.

### *Independent Commissions Must Be Free From Pressures*

A fourth principle is that in order to function properly an independent commission must not be subjected to pressures by any of the three branches of Government or by any private persons or group.

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[14] The Hon. Robert H. Jackson, Associate Justice, Supreme Court of the United States—article in American Bar Association Journal, Vol. 20, June, 1944.

## The Civil Aeronautics Act and the Functions of the Board Run Contrary to the Four Described Principles of Government

The Civil Aeronautics Board (and the Civil Aeronautics Act) must be tested for fitness against the background of the four guiding principles before set forth. It may be that the complexity of modern American society and its Government, have made some, or all, of these principles obsolete. Perhaps some, or all, need modification. But until this is proven by actual experience, we would be foolish to abandon them.

The questions to be asked, therefore, would seem to be: (1) Does the Civil Aeronautics Act, and the functions of the Board under it, run contrary to any or all of these principles? and (2) If so, how has the *experiment* worked out?[15]

### *Separation of Powers*

The Civil Aeronautics Act purposely scrambled or combined broad executive, legislative, and judicial powers in an Act to be exercised by one "authority."

Applying the test: *How has this experiment worked out,* I find that it has not worked out very well. In every route case the Board wears three hats — the promoter (representing the executive branch of the Government), the regulatory (representing the legislative branch), and the judge of a controversy often involving important property rights and private interest (representing the judiciary).

It is improbable that two of these functions could be combined in one proceeding and substantial justice be done. It is well nigh impossible that all three can be successfully combined in the same proceeding and substantial justice be done to all parties concerned.

We also have (since part of the promotional powers were taken away from the Board and given to the Department of Commerce in 1940) the exceedingly contradictory and anomalous situation of the Department of Commerce developing a route pattern through its power to finance and lay out airways, airports, and facilities, and to furnish them free of user charges; and a so-called independent regulatory commission also planning an air route system and an air transport system and bringing such plans into being by the devices of certificates of public convenience and necessity and subsidy in the form of air mail pay.[16]

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[15] The Civil Aeronautics Act and the Board were a "New Deal" experiment—a guinea pig. See note 8, *supra.* See also "The Effect of Political Interest Groups on C.A.B. Policies" by Basil J. F. Mott, Jr., 19 J. Air L. 379.

[16] "In addition to the failure to relate the various promotional activities of the federal transportation agencies, there are other defects which stand in the way of a rational program of transport development. Among these is the fact that many highly important administrative and planning functions which properly belong in the executive branch of the government have come to be confused with regulatory functions and included among the responsibilities of the independent commissions. . . . To illustrate, the Civil Aeronautics Administration

The Hoover Commission had something to say on this scrambling of the three major powers of Government. "Purely executive duties," the report stated (Book 2, p. 7), "have been imposed on the commissions with the result that these duties have sometimes been performed badly. The necessity for performing them has interferred with the performance of the strictly regulatory functions of the commission."

Promotional functions, the Hoover Commission held, being executive functions, should be the responsibility of the executive branch, saying (separate pamphlet – Department of Commerce, pp. 23-24) "Hitherto, route patterns have been determined haphazardly upon a case-by-case basis by regulatory commissions. Routes should be planned with careful consideration for the total transportation needs of the country and the areas to be served, and for the services already available by all means of transportation. Aviation route planning particularly is a highly important promotional tool. Air route planning should be coordinated with airway and airport development programs.

"A regulatory body which operates on a case-by-case basis is inherently unable to engage in the long-range research and planning which air-route planning requires."

It would seem that the old and tried principle of the separation of powers is sound on a pragmatic basis as well as a basic principle of American Governmental philosophy.

### *Limited Power of Congress to Delegate Legislative Authority*

Section II of the Civil Aeronautics Act has been interpreted by the Board and the courts to be a delegation of power to carry out the broad objectives there stated.[17]

I do not believe Congress may state a broad national policy found by it to be in the national interest, and then delegate to a Presidentially appointed five man commission the duty and responsibility of enacting legislation (in the form of regulations, grants of subsidy, or certificates of public convenience and necessity) to carry out such a policy. I con-

attempts in its airway and airport programs to plan an air transportation system which will meet the objectives laid down by Congress. But obviously a system of air transportation does not consist merely of the basic physical plant; it includes in addition the services provided by equipment operating over these facilities. Determination of the routes over which public carriers shall operate, and the nature of these operations, however, is under jurisdiction of the Civil Aeronautics Board. We thus have the anomalous situation of one federal agency determining the route pattern for air carriers and another planning the federal program to bring the routes into being."

"Confusion of the proper functions of the executive branch of the government and the proper role of the independent commissions has likewise been seen in the untenable division of authority for aviation safety, and in the promotional objectives of air mail payments which are entrusted to the C.A.B. This confusion between planning, promotion and administrative responsibilities on the one hand, and the regulatory activities of the independent commission on the other, not only deprives the executive departments of effectively exercising their responsibilities, but imposes burdens and distractions which interfere with the effective conduct of the regulatory function."—National Transportation Policy—Brookings Institution (1949), pp. 134-136.

[17] See *American Airlines, Inc.* vs. *C.A.B.*, 192 F 2nd 417 (1951).

sider such a case to be clearly an abrogation of duty and responsibility and not a Constitutional delegation of power.

I do not believe Congress may state to a commission: "It is in the national interest and public welfare to promote an air transportation system adequate to the needs of commerce, the Postal Service, and the national defense – you go ahead and fill in the details."

The Civil Aeronautics Board, under the Act as interpreted by the courts, now has the power to virtually nationalize the air transport system. If Congress intended this result, certainly the American public did not.

For example, in the *Air Freight Case*[18] the Board in effect held that the Civil Aeronautics Act delegated to it the duty and responsibility of "promoting" an air transport system adequate to meet the present and *future* needs of the commerce of the United States, of the Postal Service, and of the national defense (all national interest objectives); that granting certificates of public convenience and necessity was an act of promotion; and that the decision could be predicated, in part at least, upon its "vision of the shape of things to come" – all in the public interest.

This decision was not the "filling up the details" under a general provision of law. It was legislation *de novo* under a declared objective of national policy – a duty and responsibility which I do not believe Congress can escape or delegate, and certainly *not* one which a five man board, appointed by the President for six years terms, and not experienced in legislation, can properly perform. It may be that Government and industry have grown so complex that our fundamental principles must be disregarded, and it has become necessary for Congress to turn over to some agency appointed by the President a broad national objective and say, in effect: "Promote for the Nation an adequate communication system – you make the laws." Even so, I do not believe a five man, President appointed, commission is the proper agency.

Aside from the legal point, we must still ask the questions: Does such a delegation, which is contrary to our second principle of good government, work? Has the Board been able to "fill up the details?"

The answers are quite generally, *no*.

Two or three examples should demonstrate this point. The Board was given the broad duty of planning and promoting an air transportation system sufficient for the needs (present and future) of commerce, the Postal Service, and the national defense. It has not done so to anyone's satisfaction.[19]

It has been unable to determine criteria which will enable it to "fill in" what charges to the public (rates) or *need* mail pay to the air

[18] *Air Freight Case*, 10 C.A.B. 572, 646 (1949).

[19] "Too engrossed in case-by-case activities and thus fails to plan its role and to promote the enterprise entrusted to its case." Report of Hoover Commission; see, also, Report of President's Air Policy Commission, 1948; National Transportation Policy, *supra*, p. 134.

lines (subsidy) shall be paid to promote such a system and to provide these services at reasonable cost.[20]

But the most striking example of its inability to "fill in" details appears in its duty to provide competition *to the extent necessary*. Over the fourteen years of the Act's life, successive Boards (for the membership turnover has been such that there have been several Boards, in fact) and the members have reacted like the "blind men and the Elephant" in the old verse.[21] The phrase is so broad in the context of the Act that it has meant all things to all members, and no majority could agree from route case to route case, just what application it should have.

Consequently, the Board (or various combinations of members) have boxed the compass a dozen times on the point — from "competition for competition sake" to competition only when substantial evidence proves that the carrier or carriers serving a route are not providing service adequate to the economics of the case.[22]

The failure of Congress to limit its delegation of powers under the Act to legal, reasonable, and workable limits seems to be indicated by past experience.

*Reasonable Predictability of Commission's Actions*

Repetitious as it may be, I must again state that the structure of American society pretty much rests on a *fear* of a too strong central Government, and a *belief* in the maximum of freedom for the individual.

"Requisites for maximal freedom are: (1) Dispersion of power; and (2) Limitation of both public and private power by rules that take their departure from a high evaluation of individual personality and consent."[23]

The consent of the people to the lodgment of power in any branch, department, or commission is subject to various limitations. One of the chief ones (which is the foundation of our common law) is that such agencies of Government must exercise their powers with a reasonable degree of predictability. Those who are to act under powers entrusted to them by consent must apply known and accepted principles and reasoning to matters submitted to them for disposal.

If a contract be broken there are certain known principles and reasoning which the courts will apply. Private enterprise and private

[20] For an excellent comment on this point, see National Transportation Policy, *supra*, at pp. 215, 217.

[21] "It was six men of Indostan
To learning much inclined
Who went to see the elephant
(Though all of them were blind)
That each from observation
Might satisfy his mind." Stanza I.

[22] For an excellent review of the cases down to 1948, see Westwood, Choice of the Air Carriers for New Air Transport Routes, 16 Geo. Washington Law Review 1 (1947); see, also, Air Transportation, Nicholson, pp. 432, 433. See "Administrative Curtailment of Airline Operation" 20 J. Air L. 108.

[23] American Society, Robins, pp. 263, 264.

property rights cannot exist otherwise. Known principles and reasoning must be applied in cases of theft, fraud, or unlawful seizure of property. The situation would be intolerable if this were not the case.

The acts of the Civil Aeronautics Board are no exception. Matters are submitted to it for decision which involve very important private rights, including valuable property rights. In submitting these matters, individual Americans (persons or corporations) are entitled to demand that known principles or standards and previously disclosed courses of reasoning will be applied by the Board in making its decision.

We now come to the question: Has the Civil Aeronautics Board developed known principles or standards? Has its applied courses of reasoning with any degree of consistency?

The answers to both questions seem to be negative. And this failure to develop standards, principles, and courses of reasoning is apparent in its decisions.

The examples given in the previous subsections are applicable here: (1) The case-by-case approach in route cases marked by inconsistence in approach and inconsistence in the application of standards; (2) The inability to adopt principles or standards relative to such matters as "necessary competition"; (3) The inability to determine criteria for determining rates and subsidy.

The objective of a sound, stable air transportation system cannot be attained unless the commission entrusted with its regulation and development is itself sound and stable. Unless private enterprise entrusted with organizing, financing, managing, and operating the system can predict with a reasonable degree of certainty what the commission will do with regard to private enterprise and property interests under given conditions,[24] it cannot organize, finance, or operate properly.

### *Independent Commissions Must Be Free From Pressures*

The principle hardly needs stating as applied to the Civil Aeronautics Board. It has been entrusted with matters of vast importance to the commerce, Postal Service, and national defense. It has also been entrusted with matters of vast importance to private enterprise and private rights.

Balancing national interest and the private rights of individuals is difficult at the best. For example, the Board is presented with this prob-

[24] "It still appears that many of the Commissions have not gone as far as is feasible or desirable in laying down standards or in adhering to their announced standards. In granting new route cases, *for instance, the Civil Aeronautics Board provides very little help in understanding its governing principles;* its opinions suggest that the Board has failed to face squarely the need for an underlying program." (emphasis added) Hoover Commission Task Force Report (separate pamphlet) on Regulatory Commissions, p. 5.

"The investigative staff was advised by one carrier that it had been admonished by the Accounting and Rates Division for over-scheduling on one segment of its route—and yet had been ordered, by another Bureau of the Board, to show cause why a competing carrier should not be certificated to service the same segment because existing service was inadequate." Hearings before Subcommittee of Committee on Appropriations, 81st Congress, Second Sess., p. 1835.

lem: Carriers A, B, and C have been certificated to operate a route between East Coast City and West Coast City. They have spent millions of dollars to organize, finance, and operate their respective business on this route. They are providing adequate, excellent service on the route and are doing a profitable business without Government assistance.

The claim is made that other carriers should be permitted to operate the same route in order to build up a larger reservoir of planes and men in the interest of possible future use in the national defense; that these additional carriers would "promote" the kind of system envisaged by the Act; and that competition is needed. These additional carriers would divert sufficient revenues so that the profitable businesses built up by A, B, and C would become unprofitable. The act of the Board in granting certificates to additional carriers for the same route would, in effect, destroy the property rights of A, B, and C.

The preservation and protection of these property rights is pretty important to A, B, and C and the air industry. People are not going to invest their money unless they have some assurance of some protection. But it is of much wider significance to our American social structure based, as it is, on a *fear* of strong government and a belief in the maximum of individual freedom, than it is to the individuals affected.

The possibility of impairing or weakening this underpinning of our American society is very important to the national interest, too. There should be very convincing proof that the granting of these new certificates is of the utmost necessity to our national defense and general public welfare before the investment and property rights of the individual be confiscated or destroyed by the state.

The commission called upon to balance these *two* matters in the national interest has a very difficult job. It must ask itself: Which is more important to America: (1) The adding of twenty more reserve planes and five hundred more reserve air men to our national defense; and/or the promotion of an air system we think adequate; and/or needed competition; or (2) Safeguarding the property rights of persons and the preservation of private enterprise?

If at this point pressure groups step in and are permitted to exert pressure on the court (Board), there must be something very wrong.

We are now ready for the next question. Is the Civil Aeronautics Board subject to pressure in such cases? The answer, of course, is "yes."

Senators and Congressmen from every city along the route, Chambers of Commerce from every city, veterans' groups, groups organized by the interested airlines pro and con, all exert pressures on the Board and its individual members, by letter and telegram, visits, telephone calls, and intervention in the proceedings, etc.

In a strictly judicial proceeding, any judge permitting such pressures should be removed for cause; any person attempting to exert some of these pressures would probably be fined or jailed for contempt of court.

However, the very nature of the Civil Aeronautics Act and the

mixed functions of the Board in a route case, i.e., executive (promotional), legislative, and judicial, make *much* of this pressure not only inevitable but *not* improper. The various Congressmen have the right and duty to legitimately press for proper executive action. The various groups have the same privilege to "lobby" for their interest as they do before Congress or the executive departments of the Government.

In this atmosphere, of course, some *improper* pressures are attempted.

### The Federal Courts and the Regulatory Commissions

No attempt will be made in this article to discuss the power of the Federal Court to do by interpretive decision what Congress did not do when it enacted the Civil Aeronautics Act. Nor will there be any extended discussion of how far the court may fix certain standards or principles (filling in the details) under the Act where the Board has not done so or seems incapable of doing so. Courts can and do legislate by interpretive decision within a limited and well defined zone, for, as we have pointed out before, the division of powers between the Executive, the Congress, and the Judiciary is not an absolute and complete division under our American system of government. But the overlapping zones are pretty well defined and limited.

This power of the Federal Courts, and the limits of the power, as applied to statutes such as the Civil Aeronautics Act, is a difficult political problem. It will be the subject of another article. We will, however, point out briefly one of the difficulties of the court in reaching proper decisions and doing justice in its every day dealing with appeals under the Civil Aeronautics Act, or similar acts.

### *The Theory of Expertise*

To state the doctrine or theory of "expertise," it is first necessary to again state the philosophy of government behind the regulatory commissions. The corner stone supporting this philosophy is the conclusion by Congress that the independent commission is a necessary and useful type of agency for the regulation of industry or industrial activities under certain conditions.

This conclusion arose out of the conviction of Congress that: (1) Industry, generally, or some certain industry or activity, required Federal regulation to correct threatened or existing abuses harmful to the national welfare; (2) That while Congress could prescribe broad standards or principles designed to check, abolish, or prevent such abuses, it had not the expertness to prescribe detailed self enforcing rules in a business world, where economic conditions and industrial technology are constantly changing; (3) And even if Congress did have expertness, the solution of the varied and specific problems could only be worked out by trial and error, and continuous application and adaptation against the background of experience – a time consuming process not adapted to Congressional procedure.

The result of these conclusions was that Congress created the various commissions *each presumed to be a body of experts* in their respective fields; capable of filling in the details of the broad provisions prescribed by Congress; and developing and applying principles, and standards, and processes of reasoning to the varied and specific problems constantly arising in a rapidly changing business world.

Of course, as the Hoover Commission Task Force points out,[25] the real experts are on the commissions' staff, but the commissioners themselves, if properly chosen, may develop a degree of expertness, or at least be able to intelligently apply the advice of their staff of experts.

The courts in turn accepted the presumption that an independent regulatory commission is in fact a body of experts advised by a staff of experts, operating in a field unfamiliar to the court, capable of interpreting and *filling in* the broad provisions of the legislation under which it acts, and capable of developing and applying standards and principles of its own within the scope of its delegated power and in the light of its accumulated background of expertness and experience in its respective field.

This presumption is the so-called rule (or doctrine) of expertise. The courts have continuously accepted and applied it, have seldom ignored or looked behind it, and have usually upheld the decisions based on the expert opinions of the commissions without examining the basis of the "expert" opinion or the qualifications of the "experts."

Obviously if the presumption in any given case is erroneous for any reason — be it because of the act under which the commission works, or because the commission and/or its staff are not in truth experts — then there is apt to be a miscarriage of justice.

It is also obvious that the court cannot do much about it if the doctrine is defeated by poor appointments to the commission and its staff. It cannot act as a board of impeachment, and the work of government must go on.

Nor can it do much about it if the act under which the commission acts is such that no group of men can be found who can fulfill the requirements of expertise. A word or two of repetition on this point. The regulatory legislation which first gave rise to the rule (or doctrine) of expertise were "thou shall not" laws designed to correct very real existing abuses existing in certain industries or activities. "Thou shall not gouge or defraud the public," said Congress. "We hereby create an independent regulatory body with delegated powers to stop you from so doing."

True, there were some broad statements in the purpose provisions, but in view of the facts surrounding the particular industries these amounted to little more than noble declarations. Essentially, the jobs of the commissions were to correct known abuses and to prevent future abuses of substantially the same nature.

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[25] An excellent discussion of this point is contained in the Task Force Report of the Hoover Commission, entitled "Committee on Independent Regulatory Commissions—a Report with Recommendations." Chapter III, pp. 18-28.

Congress and the courts could very well accept the presumption that experts could be found to carry out these limited delegated powers and accomplish these limited purposes. But the Civil Aeronautics Act implies that a commission of five men can be found who are experts in political science, military science, the business of transportation, corporation finance, and experts in legislation and the law. This is not a logical presumption.

Let me give an example using the hypothetical route case described at page 152, *supra.* Restating the hypothetical case:

Carriers A, B, and C have been certified to operate a route between East Coast City and West Coast City. They have invested millions of dollars to organize, finance, and operate their respective business on this route, and are doing a profitable business without Government assistance.

The claim is made that other carriers should be permitted to operate the same route in order to build up a larger reservoir of planes and men in the interest of national defense. It is also claimed that these carriers are exercising monopoly privileges and that more competition is needed. Furthermore, that commerce and the Postal Service would benefit if additional carriers were added.

Under its own decisions the Board must answer these questions:

1. Are additional carriers needed over this route in the interest of the national defense? Now the Board obviously is not composed of military experts. The doctrine of expertise cannot apply here.

2. Are the additional carriers needed in order to satisfy the demands of the general commerce? The Board is certainly not expert in this field — certainly no more than the ordinary Federal court.

3. Are additional carriers needed to satisfy the needs of the Postal Service? The Board and staff have no expert knowledge in this field.

4. Are more carriers needed to supply necessary competition? The Board has never agreed on a standard of necessary competition and therefore cannot be said to be expert on this question.

Finally, we must arrive at the same conclusion that the Interstate Commerce Commission arrived at years ago. If the Board has any expertness in a case like this, it is merely to determine on the evidence and in the light of *past* experience whether or not the public need and would *commercially support* additional air carriers over this route.

But the Board need not decide the case on this ground alone. It may assume the role of military expert, commercial economist, political scientist, and Postal expert, and in a shot gun decision cover the field.

The Federal court, under the expertise rule, may sustain the decision on any of the four grounds unless it appears clearly and on the record that the Board acted capriciously and arbitrarily.

*The Board Partially Successful*

These tests do not prove that the Civil Aeronautics Act has been a complete failure, or that the Board has been unable to function under it. In fact, domestically, the Board has been moderately successful in the "thou shall not" field. It has had a restraining effect and has prevented wild and speculative expansion. It has also restrained the prevalent tendency of industry to consolidate into a few powerful groups. There is but little criticism of its exercise of its safety rule making powers. And it has protected the public from unfair or discriminatory fares.

Internationally, the Board took the leadership, under Chairman Welch Pogue, in planning a post war international air transport system, and played an important part in negotiating bilateral air transport agreements enabling our airlines to operate this system.

The Board's fact finding and fact analysis service has been of great help to the industry.

But the Act has not brought into being a sound and efficient air transport system. Someone says — "but see how well the airlines are doing and what a wonderful system we have." Memory of bad times is short. Only five years ago many of the airlines were insolvent — in fact, none were too prosperous. Only a very liberal use of Government subsidy kept the sheriff away. A moderate recession (not a depression) would probably create the same situation again. Civil air transport cannot be called a sound and efficient industry under such circumstances.

Further, I do not like to contemplate what a socialistic minded Board supported by a sympathetic President might do to the airlines in time of crisis. For reasons particular to its members, the Board has not fully used or asserted the great powers given to it under the Act, but that does not mean that they are not there and that a Board consisting of different members wouldn't or couldn't assert such powers.

## A Suggested Approach

We must concede that a very convincing argument can be made supporting the claim that the "new deal" experiment in independent regulatory commissions under the Civil Aeronautics Act has not worked out very well, principally because of the reasons before set forth. Further, that something must be done about it. We now come to the "how" and the "what."

As I stated at the beginning, the problem is not one of mere reorganization or "patching up" of existing legislation. If the problem arises because basic and fundamental principles of our American social and political systems were ignored by a "New Deal" Congress and President, then we must go back to the beginning and examine the problem against the background of these beliefs and principles. This envolves asking ourselves a few questions. They are:

1. Against the background of the American social structure, its basic political principles and institutions, and fundamental

fears and beliefs — what powers can be properly and safely delegated to an independent regulatory commission, such as the Civil Aeronautics Board?

2. Against the background of experience — which of these powers (the powers which can be properly delegated) can or cannot be properly applied by the ordinary independent regulatory commission, such as the Civil Aeronautics Board?

3. Of the powers which can be properly delegated and which are susceptible to proper application by a commission — which are necessary to carry out the regulation found by Congress to be needed in the national interest?

We are now in a period of revaluing the variation from older and more traditional principles and beliefs instituted by the "New Deal" and the "Fair Deal." Some of the "New Deal" variations seem *at this time* to be an improvement on the old principles. However, twenty short years have proven that many of the variations *do not work* as well as the old principles, or that they conflict with traditional beliefs which our people trust and hold to and believe *more* important.

We believe that a complete and thorough examination, evaluation, and assessment should be made of the Civil Aeronautics Act *experiment* by a committee analogous to the Hoover Commission, and against the background of the American social structure, traditional political institutions, and fundamental fears and beliefs. It may be that this committee might decide that changing conditions justify the concentration of executive, legislative, and judicial powers in one Government agency with little or no limitations of its powers in respect to private rights and private enterprise, except the use of its powers in a capricious, arbitrary manner. And it may be that Congress will agree with it. In any event the aviation industry and all individual Americans are entitled to know this.

The Hoover Commission was not concerned with the *independent* regulatory commissions *per se*. It was concerned with the "organization of the Executive Branch of the Government." Its examination of the regulatory commissions was incidental and collateral to this subject. While it revealed many of the things wrong with these regulatory commissions, and while it recommended certain shifts and transference of powers, it was not its responsibility to investigate the role of these agencies in American society. Its report is very valuable as a point of departure for such an investigation.

# A CRITIQUE OF THE C.A.A. STUDIES ON AIR TRAFFIC GENERATION IN THE UNITED STATES

By G. Roger Mayhill

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THE basic work of D'Arcy Harvey and other C.A.A. pioneers in air traffic generation has more important and farreaching significance than often is realized. This observation is true because these studies are being used: (1) As the economic basis for the Natonal Airport Plan; (2) As a decisive element in the installation of landing aids, towers and radar instruments at airports; (3) As a definite factor in establshing new airways; (4) As a guide for deciding the need for new airline routes; and (5) As an important consideration in the present proposed airline consolidation cases.

Because of this importance, these findings deserve a thorough review and critical examination as to their validity and reliability. In order to examine some of the more important tenets and to point out the possibility of more research in this area, this study was prepared. First, the published work of the C.A.A. was reviewed, and then the actual results of Chicago's air traffic as found in the last four available issues of the Airline Traffic Survey[1] were checked with C.A.A. proposals.

This type of study comes under the general heading of forecasting. Predicting the future has always been a profitable and enjoyable pastime. The persons who could accurately foretell in which direction prices of commodities or stocks would fluctuate had the advantage over his competitor. Whether he did this from an expert knowledge of his business or by keen observation of the historical trends, he found that it paid. Within the past twenty years forecasting (or attempted forecasting) has become increasingly more scientific. Methods have been borrowed from the mathematical world, especially from statistics and more complete figures have been gathered both by the government and by industries so that forecasting has gradually become more accurate. The most spectacular use has been made in the Gallup and Roper polls, predicting the outcome of elections, but business men also have learned of its advantages and have been using it more and more for their benefit. Among these users were the aviation manufacturers and the airline managements.

[1] March 1949 and 1950; Sept. 1948 and 1949.

In air transportation these predictions have been applied mainly to foretell how much traffic, both passenger and cargo, will be available over a period. At first forecasting was used to estimate passenger traffic for the entire country and the most famous published study of this type was the Curtiss-Wright study, *Air Transportation in the Immediate Post War Period,* which was published in March 1944. Later came other forecasts and also estimates of future air cargo which were especially popular shortly after the second World War. Both the Association of American Railroads and the Air Transport Association were interested in these estimates and in the effects that air transport would make on rail traffic. Beside these published reports, airlines also had their economic research departments working feverishly on research for their own operations.

## Forecasting Passengers and Cargo

When the National Airport Act was adopted in 1946, the question soon arose as to how fast air traffic would increase at the nation's airports. Even before its passage, some people had been examining this question in the office of the Administrator of Civil Aeronautics. So forecasting turned to a new field. Predictions of passengers and cargo that would be handled by each airport became necessary in order to know how fast to improve each one.

Several approaches were used. First, the relation of population and distance interested D'Arcy Harvey and other men in the office of the Administrator of Civil Aeronautics. At once they realized that the population of the city constituted the potential air passengers, – the number of which would decrease as the distance they desired to travel increased. Before the Airport act was passed, studies by Mr. Harvey were issued under the names of the Administrator, Charles I. Stanton and the Economic Consultant, Martin Taitel, which pointed out the relationship between population and distance.[2]

A second approach centered around the economic characteristics of the cities. After Harvey became head of the Research and Analysis branch of the Planning division of the Office of Airports in the C.A.A., he applied a technique developed by Dr. Raymond Franzen,[3] independent Market Consultant of New York City, and himself, while working for the Equitable Life Insurance Company. The first questions were how many people were in a given place and what kind of people they were; that is, were they air travelers? This problem led to his study of communities and the application of the "economic characteristics" idea.

Later Harvey developed a formula combining the concepts of population and distance. This formula was announced as $\frac{P \times P}{D}$, which

[2] Statement by Charles I. Stanton, Administrator of Civil Aeronautics, before the CAB Hearing on Local Feeder-Pickup Airline Services, September 1943.

[3] Dr. Franzen and Mr. Harvey were doing economic research in the field of real estate values, for the Equitable Life Insurance Company. The basic ideas have so far not been published in any scholarly publication except for the application to air transportation made by Mr. Harvey.

as may be seen, multiplied the populations of the two cities and divided this figure by the distance between the two places.[4]

To develop this formula, Harvey took the concepts relating to population mass and intercity distance, as reviewed by him in a recent article in this journal.[5] No rational basis is given for the formulation except that it seems to be borne out by an examination of traffic between Chicago and eleven balanced cities, as is analyzed later.

Besides the basic formula, several exceptions were listed:

1. Air distance could be no more than the normal 15% less than rail distance.
2. The minimum competitive distance was set at 100 miles.
3. All cities were divided into one of four classfications: Marketing, Institutional, Balanced, and Industrial and the first two were considered better air traffic generators than the last two.
4. The traffic between any pair of cities varies with the density of cities in the geographic area.
5. Not discussed but listed were management factors, such as direct versus indirect connections, number of schedules, time of schedules, service standards and other human factors.[5a]

Harvey's work is still continuing. At the present time, several staff studies have been prepared showing "large, medium and small airline passenger hubs," or, in other words, those cities having the largest amount of airline traffic. Then the number of these "hubs" or cities on any airline measure the "market accessibility" which is defined as the "size of the passenger market accessible to the airline." Since this definition does not measure the degree to which an airline route furnishes direct on-line (a passenger using the same airline from origin to destination) service between its pairs of communities, another concept has been employed called "Demonstrated Route Capability." Its meaning is defined as "the number of on-line passengers for the pairs which had 100 or more total passengers in September 1950 and expressing this figure as a percentage of the total on-line passengers for the 100 pairs in September 1950." No official publication detailing this work has yet been issued.[6]

Most of the stimulating conclusions of the work on air traffic generation are outlined in a series of printed pamphlets issued by the C.A.A. known as the *Airport Planning Series.* This group of bulletins analyzes seven major topics, all of which could form separate and distinct research projects: (1) Amount of airline traffic between cities; (2) Influence of distance on airline traffic; (3) Economic type of air traffic city, as shown in the relation between the economic characteristics and

[4] This whole doctrine is explained in the most detail in any published form in the C.A.A., Airport Planning Series, *Effective Community Air Traffic Potential.*

[5] Harvey, D'Arcy, "Airline Passenger Traffic Pattern within the United States," Journal of Air Law and Commerce, Spring 1951, vol. XVIII, No. 2.

[5a] Associated with Harvey in these studies were Graham Aldrich, Will Carsel, Francis Smoot, and Jesse Sternberger, all of whom are still working in this field in various capacities.

[6] Interview with D'Arcy Harvey in Washington, D. C., February 15, 1952.

the amount of airmail and air cargo and the number of airline passengers and personal aircraft; (4) Potentials of commodities for air cargo and the number of airline passengers and personal aircraft; (5) A survey and classification of present airports; (6) Type, classification and needs for airport facilities; and (7) Type of airport required for each city in the future — the economic basis of the National Airport Plan.[7]

Since these bulletins are important but some are not of particular significance to the study, they will be reviewed but for the most part rather briefly:

1. Amount of arline traffic between cities led to the development of the formula $\frac{P \times P}{D}$, which is the main interest of this study and which has already been discussed.

2. Influence of distance on airline traffic[8] showed that half of all airline passenger travel was less than 300 miles and a fourth less than 200 miles. Regional differences in the length of trip were pronounced. 52% of the air passengers in the northeast but only 14.7% on the Pacific coast travel less than 300 miles. 12% of Pacific coast travellers went more than 2000 miles.

Differences in the trip distance among cities were even sharper than among regions, varying in percentage for those travelling under 300 miles from San Francisco with 10½% to small cities as high as 98% and were related to (1) Population size group; (2) Geographic density of cities; and (3) Basic economic characteristics of communities. The traffic of a city generally was found to be with its nearest large neighbor, if it were at a distance over 100 miles. Many pairs of cities had their largest percentage of traffic with one another such as Detroit and Cleveland. Balanced and industrial cities generated flights of short distance, whereas marketing and institutional centers developed flights of longer distance. Average distances travelled by passengers from larger cities were longer than those taken from less populous places.

Research in this area could be continued in this way: (1) Historical trends of airline distances could be traced to discover any unusual changes. (2) More relationships might be found in tables of the C.A.A. bulletins and in the new A.T.A. publication. (3) All the pairs of cities having similar distances could be studied as a group to ascertain why some pairs generated more traffic than others.

3. The economic type of air traffic city[9] was the most thoroughly explored. These bulletins compared the economic characteristics of marketing, institutional, balanced, and industrial cities with such indexes as amount of air mail, and air cargo; and number of airline passengers and of personal aircraft.

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[7] C.A.A., *Effective Community Air Traffic Potential*, January 1950.

[8] C.A.A., *Airline Travel Distances*, December, 1948. The Air Transport Association also has compiled recently for every airline city the percentages of passengers by distance.

[9] C.A.A., Airport Planning Series, Economic Character of Communities, November 1948 Domestic Air Cargo, December 1948; *Airline Passengers*, Dec. 1948; *Personal Aircraft*, Dec. 1948; *Airmail Potentials*, Dec. 1948.

Marketing centers were defined as lower than average in number employed in mining and manufacturing and higher than average in wholesale sales. Institutional places were lower than average in both number employed in mining and manufacturing and in wholesale sales. Balanced cities were practically average in both number employed in mining and manufacturing and in wholesale sales. Industrial were higher than average in number employed in mining and manufacturing and lower than average in wholesale sales.

In all cases, balanced cities were below the marketing and institutional centers and the industrial cities were lowest in air traffic generation. Marketing centers outranked institutional cities on air mail dispatched, and in two out of three cases on airline passengers; but institutional cities had more personal aircraft and in one case, more airline passengers.

Is purchasing power considered as carefully as it should be? The publication states: "It was evident, however, that communities with the same economic character have similar, rather than identical attributes, and that differences do exist in purchasing power and air transportation potentials . . . It is to be remembered that these supplementary economic criteria have value when used for a particular community."

What do the authors mean by these statements? How much influence does purchasing power have? How will it be applied to differentiate among the cities? Again, just how do the authors propose to use purchasing power of a city to modify their concept of marketing centers, institutional, balanced, and industrial cities?

Possibly it is through statistics on government employment, finance and professional employment, because the bulletin notes that these cities are high in purchasing power; or possibly through transportation employment because Omaha, high in this respect, is low in purchasing power. As supplementary criteria, therefore, it suggests the use of the following indexes: (1) Percentage of the gainfully employed engaged in transportation; (2) Percentage of the gainfully employed engaged in finance, insurance, real estate, and professional and related services; (3) Percentage of the gainfully employed engaged in government. (4) Potentials of commodities for air freight were developed through an exceedingly simplified classification relating to density and price.[10] All commodities, with certain modifying factors, were divided into three categories: "high value-low density," "medium value and density" and "low value-high density." The first of these contained mainly manufactured products which were the best air transportation possibilities while the third included unfinished, semi-finished, and raw products which were the poorest for air transport.

The value per plane load was calculated from this information and four categories established. Four modifying factors: (1) Concentration of source of supply; (2) Average distance hauled; (3) Commodity's ability to absorb higher transportation costs; and (4) Perishability or

[10] C.A.A., Domestic Air Cargo, Dec. 1948.

seasonality, were considered and a total of twelve rating groups were established. Each commodity was then placed in a rating group and in this way the amount of air cargo by commodities and by communities could be predicted. The study estimated that by 1955 the 50 largest communities would still have 76.4% of the enplaned cargo and 54.86% of the deplaned cargo. Airports were surveyed[11] according to: (1) The type (municipal or commercial); (2) Class (length of landing strip); (3) Population size of the community (a) independent cities under 10,000, (b) between 10,000 and 49,999, (c) metropolitan districts between 50,000 and 249,900 and (d) over 250,000; and (4) Type of airport landing area (paved or unpaved).

In classifying the airports, non-commercial activities were described for each class of airport. The items were: (1) Total based aircraft; (2) Single and multi-engine based aircraft; (3) Commercial, instructional, business or personal based aircraft; (4) Total aircraft movements for a month; (5) Peak hour aircraft movement; (6) Highest possible aircraft movement possible per hour; (7) The percentage of capacity used in the highest hour; (8) The total employees at the airport; (9) The total fixed base operators and their employees (10) The total membership of all flying clubs at the airport, and (11) The total planes owned by all clubs at the airports. All of this leads toward a more definite basis for deciding the type airport needed by each community.

Airports were classified according to the size of community[12] and were listed to show: (1) Percentages located less than five miles from the city; (2) Those with more than 161 acres; (3) The type of installations, buildings, and services offered. In this way a typical airport was described for each class.

In July 1950, ratios were established between the passenger volume, number of people at the airport and the number of patrons of each concession. Space utilization for lobby, seats, and parking facilities were studied extensively. As the airport grows larger, the concessions, it was noticed, became more specialized. The smaller the volume of activity at the airport, the more concentrated this movement was in a peak hour. Airports with more than 1,000 daily passengers tended to have approximately 12% at the peak hours and those with less than 200 per day, more than 23% in the peak hour.

The basic finding was "that practically all major activities at an airport are closely related to the volume of passenger activity" with the exception of automobile parking.

Conversion factors were offered so a concession could find out how many customers it would have, by using the number of passengers boarding planes.

The study of the type of airport required for each city[13] includes six

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[11] C.A.A., December 1948, *Peak Air Carrier Movements at Airports.*

[12] C.A.A., *Airport Facilities*, December 1948; *Airport Terminal Activities and Space Utilization*, July 1950.

[13] C.A.A. *Community Airport Requirements.*

types of airport: intercontinental express, intercontinental, continental, express, trunk line, and feeder.

Much data about every city over 10,000 was recorded, but the greatest importance was accorded two primary ideas: (1) Traffic volume, stated in terms of annual airline passengers, broken at 375,000, 15,000, 3,000 and under 3,000, and (2) Community traffic character, defined in terms of average length of passenger haul. A long haul was considered over 606 miles, average haul 328 to 606, and short haul under 328 miles. Reasons for selecting these two outstanding characteristics were that they "must largely govern the type of aircraft needed to serve a community and hence its airport runway length requirements."

Other data recorded included population size group, type of purchasing power, number of community enplaned passengers, tons of mail, tons of cargo, number of air carrier departures, and average flight length.

Many exceptions were listed. Airport ratings were to be raised for eight reasons: (1) Eight cities "located along the coast line and serving interoceanic air traffic; (2) A city having a larger percentage of the country's air cargo traffic than passenger traffic; (3) Cities with inadequate service or poor connections; (4) Cities with considerable seasonal traffic; (5) Cities with a large number of passengers who bought tickets over 300 miles; (6) Cities with a large number of international passengers; (7) A city with a feeder type airport serviced by a trunk line, and (8) Cities with peculiarities such as "weather conditions and the general pattern of travel." For two reasons, the type of airport could be reduced in rank: (1) A city with prospects of less than 1000 generated air passengers per year by 1955, and (2) A community within approximately 25 miles of another air carrier airport.

### *Method of Checking the Formula*

What method was used to check the formula $\frac{P \times P}{D}$?

First, the formula was calculated for each route. In order that this number would not be unwieldy, tens of thousands were rounded so that the result was the same as though it had been divided by 100 million.

Second, the average traffic for four months (September 1948 and 1949, March 1949 and 1950) was obtained from the *Airline Traffic Survey*.

Third, to facilitate comparison between theoretical and actual travel the average traffic for the four months was divided by the number obtained by using the formula and called generated traffic or "G."

Fourth, passengers for the same four months (September 1948 and 1949, March 1949 and 1950) the total between Chicago and another city was divided by the total traffic of the other city for the same four months to obtain the percentage of air travellers of that city which went to Chicago.

Fifth, the total passengers between Chicago and another city for September 1940 was divided by the total traffic of the other city in September 1940 in order to obtain the percentage of air travellers of that city which went to Chicago in 1940. Herein was obtained an historical perspective.

Sixth, this information was in columns so that cities out of line could be studied more carefully to ascertain any reason why they differed from the average.

### *Does the Formula Work*

Does the formula show the same pattern as that for traffic generated? Immediately one realizes that the formula is not expected to give the exact amount of traffic, because management factors such as number of schedules, type of schedules and differential cost between the two cities also influence the size of traffic flow. The formula purports to represent the potential that is available. Still a check whether the actual traffic conforms to the results from the formula is worthwhile and, if it does not, find the reasons for its not being comparable.

The original document attempted to prove by use of the traffic between Chicago and the balanced cities that the formula was correct. It was stated that "The actual distribution of Chicago's air traffic during 1948, on the right hand side of the chart, shows the close relationship between theoretical computation and actual performance. Again, be it noted, Chicago's largest traffic actually was with St. Louis, the next largest with Cleveland, etc., and its lowest with New Haven. In fact, only one of the eleven communities, Buffalo, was out of line in this comparison of theoretical versus actual distribution of Chicago's traffic."

The first noticeable characteristic of the list in the C.A.A. bulletin is that the cities are only those over 250,000. Even then certain cities over 250,000 are omitted: Philadelphia, Baltimore, Toledo and Syracuse. Although these cities may have been eliminated because of the exceptions already mentioned they should have been included and the exceptions explained more clearly. Philadelphia and Baltimore would be among those cities that are excluded because "the traffic between any pair of cities varies in accordance with the density of cities in the geographic area." Are Toledo and Syracuse omitted for the same reason? If so, why should Cleveland, Boston, Buffalo, Albany or New Haven be included? Also why does New York generate heavy air traffic if "density of cities in the geographic area" reduces the amount?

Although it was difficult to tell exactly what figures were used: March 1948, September 1948, or a combination of the two months, discrepancies in the figures in the chart also appeared. In any of these months, Cincinnati had less traffic than Indianapolis, but the C.A.A. bulletin showed the opposite.

In order to check the formula, one might look at Table 1 which

compares the formula result with actual traffic. (See Table 1. Balanced Cities Arranged According to Formula $\frac{P \times P}{D}$.

If particular cities are selected from this list, the formula would work: e.g., selecting those cities with G between 150 and 190, which retains only seven cities out of the twenty-one. Below Nashville on the table one could select three more in descending order, such as Knoxville with 534, Syracuse with 344, and Roanoke with 128. The formula may have some underlying basis, but when all cities are considered, it does not always conform to actual results even after classifying the places according to their characteristics, as suggested by the C.A.A. One needs only to look at Table 1 to see that traffic appears very irregular when column 2 is inspected. This fault, however, does not mean the formula should be discarded. More exceptions may be added, especially in respect to amount of purchasing power. The formula, itself, may be modified in several ways to increase its reliability.

Next, cities were ranked according to G (Average Traffic divided by the formula $\frac{P \times P}{D}$). All those with this factor above 100 follow:

*Marketing*: Billings 516; Seattle 462; Dallas 445; San Francisco 440; Kansas City 380; Fargo 375; Minneapolis 363; Reno 337; Des Moines 316; Omaha 289; Salt Lake 279; Jacksonville 272; New York 272; Casper 236; Atlanta 235; Boise 226; Amarillo 217; Charlotte 216; Oklahoma City 203; Lexington 179; Memphis 168; Sioux Falls 166; Shreveport 153; Little Rock 145; Corpus Christi 139; Medford 133; Duluth-Superior 116; Twin Falls 101.

TABLE 1

Balanced cities Arranged According to Formula $\frac{P \times P}{D}$

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| *Balanced Cities* | $\frac{P \times P}{D}$ | Traffic | Traffic ÷ $\frac{P \times P}{D}$ | Pop. | Distance | % of City's Traffic with Chicago | Traffic with Chicago Sept. 1940 |
| St. Louis | 368.00 | 5581 | 151.00 | 1681 | 251 | 15.9 | 2047 |
| Philadelphia | 301.00 | 2304 | 76.50 | 3672 | 671 | 8.6 | 595 |
| Cleveland | 259.00 | 5220 | 200.00 | 1465 | 307 | 11.9 | 1973 |
| Cincinnati | 199.00 | 3048 | 154.00 | 903 | 249 | 13.5 | 954 |
| Indianapolis | 187.00 | 3584 | 191.00 | 552 | 162 | 22.8 | 1072 |
| Boston | 154.00 | 2711 | 176.00 | 2370 | 859 | 3.2 | 876 |
| Buffalo | 128.00 | 1464 | 113.00 | 1090 | 468 | 6.7 | 576 |
| Louisville | 117.00 | 2284 | 165.00 | 576 | 271 | 15.3 | 564 |
| Baltimore | 115.00 | 458 | 39.80 | 1336 | 640 | 3.7 | 43 |
| Peoria | 108.00 | 686 | 62.10 | 250 | 127 | 32.7 | —— |
| Toledo | 98.30 | 1029 | 105.00 | 395 | 221 | 16.6 | —— |
| Columbus, O. | 97.20 | 1641 | 169.00 | 502 | 284 | 12.1 | 282 |
| Ft. Wayne | 58.70 | 313 | 53.30 | 182 | 144 | 13.9 | 102 |
| Birmingham | 53.10 | 302 | 56.60 | 555 | 574 | 2.9 | 75 |
| Lansing | 50.00 | 513 | 102.00 | 172 | 187 | 2.6 | 146 |
| Battle Creek | 49.30 | 126 | 25.60 | 120 | 134 | 2.4 | 50 |
| Nashville | 44.40 | 689 | 155.00 | 321 | 347 | 5.3 | 126 |
| Springfield, Ill. | 42.80 | 274 | 64.00 | 131 | 168 | 35.4 | 50 |
| Charleston, W. V. | 41.80 | 484 | 115.00 | 320 | 421 | 5.1 | 39 |
| Knoxville | 40.10 | 534 | 133.00 | 336 | 461 | 6.1 | 18 |
| Albany | 36.40 | 127 | 34.90 | 515 | 778 | 1.5 | 1 |
| Terre Haute | 35.30 | 147 | 41.60 | 105 | 163 | 23.5 | —— |

| *Balanced Cities* | 1 $\frac{P \times P}{D}$ | 2 Traffic | 3 Traffic ÷ $\frac{P \times P}{D}$ | 4 Pop. | 5 Distance | 6 % of City's Traffic with Chicago | 7 Traffic with Chicago Sept. 1940 |
|---|---|---|---|---|---|---|---|
| Syracuse | 31.60 | 344 | 109.00 | 342 | 611 | 3.8 | —— |
| Oshkosh | 30.50 | 62 | 20.30 | 91 | 162 | 27.6 | —— |
| Cedar Rapids | 27.80 | 292 | 105.00 | 104 | 205 | 27.8 | —— |
| Harrisburg | 27.50 | 180 | 65.40 | 291 | 583 | 5.4 | 47 |
| Chattanooga | 27.50 | 202 | 73.40 | 245 | 490 | 4.3 | 77 |
| Tulsa | 23.40 | 666 | 284.00 | 249 | 584 | 4.4 | 114 |
| Tampa | 22.40 | 1231 | 549.00 | 409 | 1001 | 9.1 | 48 |
| New Haven | 18.30 | 16 | 8.74 | 262 | 785 | 4.9 | —— |
| Wausau | 17.30 | 56 | 32.40 | 80 | 254 | 24.1 | —— |
| Mobile | 15.90 | 48 | 30.10 | 229 | 792 | 1.2 | 0 |
| La Crosse | 15.60 | 82 | 52.50 | 67 | 234 | 17.6 | —— |
| Roanoke | 11.70 | 128 | 109.00 | 113 | 611 | 3.8 | —— |
| Augusta, Ga. | 11.60 | 83 | 61.90 | 162 | 672 | 3.5 | 2 |
| Charleston, S. Car. | 11.50 | 84 | 73.50 | 160 | 765 | 2.8 | 9 |
| St. Joseph | 11.30 | 24 | 21.40 | 97 | 453 | 5.1 | —— |
| Joplin | 11.20 | 116 | 104.00 | 107 | 507 | 7.4 | —— |
| Macon | 10.90 | 45 | 41.70 | 134 | 667 | 3.8 | —— |
| Burlington, Ia. | 10.90 | 80 | 73.40 | 42 | 201 | 29.1 | —— |
| Eau Claire | 10.30 | 61 | 59.40 | 54 | 285 | 27.2 | —— |
| Parkersburg | 8.51 | 34 | 39.60 | 66 | 423 | 5.9 | —— |
| Cumberland | 9.82 | 4 | 4.00 | 90 | 504 | 2.4 | —— |
| Clarksburg | 8.59 | 12 | 14.50 | 85 | 544 | 1.5 | —— |
| Elmira | 8.33 | 43 | 51.60 | 87 | 576 | 2.3 | —— |
| Hagerstown | 7.75 | 6 | 7.70 | 75 | 560 | 2.2 | —— |
| Lynchburg | 7.16 | 18 | 25.10 | 76 | 579 | 2.5 | —— |
| Watertown | 7.89 | 2 | 3.52 | 85 | 659 | 0.9 | —— |
| Anderson | 7.00 | 1 | 1.71 | 90 | 737 | 0.6 | —— |
| Ottumwa | 6.93 | 3 | 3.89 | 47 | 375 | 0.9 | —— |
| Bradford | 6.84 | 17 | 25.10 | 56 | 481 | 4.3 | —— |
| Wichita Falls | 6.57 | 24 | 36.50 | 98 | 806 | 1.3 | 2 |
| Chisholm | 5.41 | 13 | 24.00 | 50 | 508 | 9.4 | —— |
| Florence | 4.82 | 19 | 38.80 | 54 | 612 | 4.4 | —— |
| Pueblo | 4.82 | 31 | 65.30 | 89 | 1015 | 2.6 | 0 |
| Augusta, Me. | 4.58 | 2 | 5.45 | 162 | 1008 | 0.3 | 1 |
| Ponca City | 4.17 | 5 | 13.10 | 49 | 646 | 3.1 | 2 |
| Meridian | 4.05 | 4 | 11.10 | 64 | 869 | 0.9 | 0 |
| Burlington, Vt. | 3.48 | 11 | 30.70 | 62 | 980 | 0.4 | 7 |
| Columbus, Ga. | 3.41 | 12 | 35.10 | 38 | 612 | 5.9 | —— |
| Glens Falls | 2.37 | 4 | 16.80 | 39 | 902 | 0.3 | —— |
| Keene | 2.33 | 3 | 15.00 | 38 | 895 | 1.2 | —— |
| Brunswick | 1.82 | 24 | 130.00 | 29 | 876 | 4.7 | —— |
| Klamath Falls | 1.13 | 110 | 90.20 | 42 | 2043 | 1.3 | —— |

*Institutional*: Miami 2718; Rochester, Minn. 905; Tucson 855; Phoenix 581; Hot Springs 530; W. Palm Beach 466; Bismarck 451; Washington, D.C. 399; San Antonio 398; Spokane 339; Rapid City 289; Denver 320; Tallahassee 285; Albuquerque 282; Traverse City 275; Huron 261; Orlando 260; Portland 248; Houston 236; Wichita 225; Daytona Beach 223; New Orleans 204; Great Falls 194; San Diego 191; Sheridan 184; Los Angeles 185; Springfield, Ill. 174; Colorado Springs 172; Raleigh 161; Brownsville 153; Paducah 151; Asheville 149; El Paso 143; Austin 140; Missoula 137; Cheyenne 133; Santa Fe 118; Lincoln 114.

*Balanced*: Tampa 549; Tulsa 284; Cleveland 200; Indianapolis 191; Boston 176; Columbus, Ohio 169; Louisville 165; Nashville 155; Cincinnati 154; St. Louis 151; Knoxville 133; Brunswick, Ga. 130; Charleston, W. Va. 115; Buffalo 113; Syracuse 109; Roanoke 109; Toledo 105; Cedar Rapids 105; Joplin 104; Lansing 102.

*Industrial*: Muskegon 200; Grand Rapids 188; Sault Ste. Marie 179; Butte 172; Dayton 147; Evansville 141; Detroit 124; Akron 121; Bristol, Tenn. 121; Moline 120; Hartford-Springfield 117; Greensboro 114; Norfolk 106; Pittsburgh 104.

Inasmuch as this table showed that traffic with institutional cities was stronger than with marketing centers, one wonders whether a separate classification for institutional cities is necessary. Possibly it should be subdivided. The first five institutional cities generated a higher percentage of traffic as related to the formula than did the first marketing city of the same rank and institutional cities were higher throughout the entire list.

Since resort and gateway cities ranked very high, while governmental cities were lower, new classifications of these types might be considered. High institutionals, for the most part, are resort cities, although Rochester, Minnesota, is a medical center. Some of the state capitals and university cities rank low, but more study and research should be necessary to say that they generate less traffic for their potential than other institutionals. Possibly traffic is higher between cities of the same type: such as governmental communities. A study of the traffic among Washington, D. C., and the state capitals would be worthwhile.

Only three state capitals, Bismarck, Denver, and Tallahassee appear on the list of institutionals before Raleigh, which is in twenty-ninth place. Below Raleigh on the list are: Austin, Cheyenne, Santa Fe, Lincoln, Helena, Columbia, Jackson, Sacramento, Topeka, Madison, Iowa City, and Concord. More study of the characteristics, i.e., proportion of the population engaged in government, should also be made.

Some other exceptions were noted to economic classification. Both Reno, among marketing centers, and Tampa, among balanced cities, are more like institutional or resort cities.

Whereas the high traffic producers among marketing and institutional centers are those at a long distance from Chicago, the high traffic producers among industrial cities are nearby with the exception of Butte, which is in the northwest, a strong territory for Chicago. This difference between industrial and marketing centers confirms the finding of the C.A.A. in this respect. No pattern on distance is apparent for balanced cities. Muskegon, Grand Rapids, and Sault Ste. Marie are all high because flying over the lake cuts time from the slower surface transportation, which is forced to move around the body of water.

A peculiar arrangement of marketing centers was noticed. Thirty-six cities classified as marketing are located west of the Mississippi; nine east of Chicago and north of Georgia along the Atlantic seaboard; eleven south and southwest in Georgia, Florida, Kentucky and Tennessee and three north of Chicago in Wisconsin and Minnesota. Curiously enough, no marketing center exists in Ohio, Illinois, Indiana or Michigan, and outside of Maine, none in New England.

Chicago received large amounts of traffic from particular areas. Many leading traffic generators are located in the northwest: Billings,

Seattle, Fargo, Minneapolis, Rochester, Minn., Bismarck, Spokane, Rapid City, and Butte. Other sections of the country which are high traffic producers are: Florida and the states in the southwest especially Arizona, Arkansas, Oklahoma, and Texas. Slightly below cities in these regions are others directly west of Chicago, such as Denver and Kansas City. Nearby cities over 100 miles like Indianapolis and many in Michigan and Ohio exchange considerable traffic with Chicago.

Cities which received air service after September 1940 were at the bottom of the list. Only a few had managed to rise higher; such as Hot Springs, a resort with 20 percent of its traffic with Chicago; Lexington, Kentucky, a marketing center at the favorable distance of 320 miles.

Another worthwhile study might be made of cities above 250,000 with a weak generating factor. Marketing and institutional cities with less than 200 are: San Diego, Los Angeles, Memphis, Duluth, Ft. Worth, Richmond, Fresno, and Sacramento. Balanced cities with less than 150 are Knoxville, Charleston, W. Va., Syracuse, Toledo, Philadelphia, Harrisburg, Peoria, Birmingham, Baltimore, Albany and New Haven. Industrial cities with less than 100 are: Rochester, N. Y., Scranton, Providence, Flint, Youngstown, Allentown, Worcester, Wilmington, Reading, Wheeling, Bridgeport and Johnstown, Pa. Many of these cities are either on the east coast or on the west coast, appearing as though their traffic goes north and south rather than east and west.

### *What Population Figure Should Be Used?*

If one factor in the formula is population, the question soon arises as to the meaning of this term and the definition which should be used. Present cities include many communities and many people living outside the central area. The census of 1950 has changed the concept of a metropolitan district to that of a metropolitan area. How much does this affect a formula like $\frac{P \times P}{D}$?

First, let us consider the concept of a metropolitan city. The new 1950 definition of a metropolitan area states:

> Each standard metropolitan area contains at least one city of 50,000 or more. In general, each comprises an entire county or group of 2 or more counties that are economically and socially integrated. The outlying counties must meet several qualifications, regarding population density and the volume of non-agricultural employment. In New England standard metropolitan areas comprise groups of contiguous cities and towns.

The 1940 definition of a metropolitan district included all adjacent and contiguous minor civil divisions having a population of 150 or more per square mile. In some metropolitan districts a few less densely populated districts were included on the basis of special qualifications, especially all the thickly settled territory in and around a city or group of cities.

Metropolitan New York City is used as an example of this shift. In the 1940 census all of Bronx, Kings, Nassau, New York, and Queens

counties, New York, and Bergen, Essex, Hudson, and Union counties New Jersey, were part of the New York metropolitan area. Included also were parts of Rockland, Suffolk, Westchester counties, New York; Fairfield county, Connecticut; and Middlesex, Monmouth, Morris, Passaic, and Somerset counties, New Jersey. In the 1950 metropolitan area, the parts of Fairfield county, Connecticut, and Monmouth county, New Jersey, were omitted entirely and the rest of Rockland, Suffolk, Westchester counties, New York, and of Middlesex, Morris, Passaic, and Somerset counties, New Jersey, were added.[14]

Besides the definition using counties as a basis, the population of the city by itself could be used. In order to compare the three concepts $\frac{P \times P}{D}$ was computed for balanced cities, using as a basis, each of the following definitions: (1) Population of metropolitan area in 1950; (2) Population of central city in 1950, and (3) Population of metropolitan district of 1940.

By using the population of central cities, Indianapolis and Cincinnati reversed positions, thus placing both communities in their proper order in relation to traffic. Cincinnati has about 44% of its population outside the central area, while Indianapolis has only 22% outside the city. Although Boston with 65% outside the central area is placed below its natural traffic position, Columbus and Toledo are reversed into a correct pattern. Peoria, Nashville, Tampa and Toledo are reversed into a correct pattern. Peoria, Nashville, Tampa and Tulsa are brought nearer their proper place, because Peoria has a much higher percentage outside the city than either Nashville or Tulsa.

What cities were pushed in the wrong direction? Philadelphia, which is atypical; Boston, which has already been mentioned; Syracuse, which has a large proportion within the city limits; and Charleston, W. Va., Knoxville, and New Haven. The Albany metropolitan area included

[14] Since this paper was written the census bureau has introduced a new concept in the final form of the computations. This area is now called "Urbanized area" and changes the definition to the following: "Contains at least one city of 50,000 inhabitants or more in 1940 and also the surrounding closely settled incorporated places that meet the criteria listed in section on 'urban fringe'." Urban fringe is defined as: "The following types of areas are embraced if they are contiguous to the central city or cities or if they are contiguous to any area already included in the urban fringe: 1. Incorporated places with 2500 inhabitants or more in 1940 or at a subseqent special census conducted prior to 1950. 2. Incorporated places with fewer than 2500 inhabitants containing an area with a concentration of 100 dwelling units or more with a density in this concentration of 500 units or more per square mile. This density represents approximately 2000 persons per square mile and normally is the minimum found associated with any closely spaced street pattern. 3. Unincorporated territory with at least 500 dwelling units per square mile. 4. Territory devoted to commercial, industrial, transportational, recreational, and other purposes functional, related to the central city. 5. Also included are outlying noncontiguous areas with the required dwelling unit density located within 1½ miles of the main contiguous urbanized part, measured along the shortest connecting highway and other outlying areas within one-half mile of such non-contiguous areas which meet the minimum residential density rule." New York's population is reduced from 12,903,500 to 12,296,117 under this definition. Under the new definition all of Bronx, Brooklyn New York, Queens, and Richmond counties are included and now parts of all the other counties. This differs from the 1940 census of metropolitan districts by omitting entirely Monmouth county, New Jersey, and Fairfield, county, Connecticut, and parts of Bergen, Essex, Hudson and Union counties, New Jersey, all of which formerly were included.

Schenectady and Troy; when only the population of Albany itself is used, it moves toward its proper place.

The conclusion of this study, is that some compromise is necessary between using the population of the metropolitan area given in the census and the size of the population within the central city.

If time permits, or course, a more detailed analysis of the traffic generation of each airport would be the most valuable and correct method to determine how much population should be included. Where do people boarding the planes originate? Some studies have been made but literature on the subject has not been collected.[15] If enough of these studies are made, the pattern of the use of the airport as related to a metropolitan city might be generalized. The problem as to location of city limits still remains.

This study indicates that the population should be that of the central city plus part of its outer fringe. Although this theory is not perfect, the actual traffic pattern it forms resembles more closely the actual situation.

Likewise, the question of an aggregate of communities is raised. What should be done about the economic characteristics and what has been done by the C.A.A. when one community is marketing, one community is industrial and one is balanced? The C.A.A. has not published enough information to reveal what they did, and this study did not consider changes in the economic characteristics because census figures for 1950 are not sufficiently complete to make any research profitable as yet.

Lastly, a comparison was made between the results obtained with the formula by using the 1940 population figures which were used by the C.A.A. and by using the 1950 figures; i. e., to see whether the new definition by county is better or worse than the old metropolitan definition and whether the new figures improved the sequence.

The population for 1950 in all cases improved the order, except for cities which already were very atypical, such as Tulsa and Tampa. This fact probably shows only that the old census was out of date. New statistics employing the old definition would be worthwhile to see whether further improvement would be realized. The new definition of urbanized areas, now being published, may be even better for this purpose.

In the case of cities under 50,000, the lower limit for metropolitan areas, should the city or county unit be used? Why should the population of the county containing Lima, Ohio, which has slightly more than 50,000 population be the unit and only the population of the city be applied for Battle Creek or Muskegon, Mich., both of which have 48,000 and 49,000 in the central city? For cities under 50,000 the C.A.A. took the population of the city only, but in this report, population of counties was employed for those cities under 50,000.

[15] Horonjeff, Robert; Belmont, Daniel M; Jones, John Hugh, *The Use of California Airports Served by Scheduled Air Carriers as Related to Passengers' Homes and Origins*, Research Report No. 10-1, Transportation and Traffic Engineering, University of California. Berkeley, 1951.

The market area surrounding an airport needs much more study. Probably the population of the city plus about one half of the persons in the county would be a fair comparison. The census bureau should help by offering a district akin to the metropolitan area concept for the places under 50,000. In some states the county unit is obviously too big, and in a few cases more than one county should be included. With the changes in areas created by the automobile, this whole problem of what comprises a market area offers a great challenge to market researchers, the census bureau, geographers and economists in this field for the next few years. Especially is this study necessary in the field of air transport. As each airport is added to the ones having scheduled service, the market area served by surrounding airports will change in size. The whole question as to how small or how large an area should be in the radius of one airport to render adequate service, is introduced.

Does there seem to be any bias in the formula due to size of city? To answer this question the generating factors for routes from Chicago to the various cities in order of their population were compared. A check indicated little, if any, distortion in the formula due to size of city. The generating factor for a number of metropolitan cities less than 100,000 rises to 100 and 200. A glance through the non-metropolitans also reveals the same kind of information. Many of the smaller cities may be weak in traffic generation for the same reason that large places have few passengers or the fact that they have not had service as long may be important.

Air traffic is directly related to the location of cities. How does the map of other cities over one million population appear when they are located in relation to Chicago as a hub? Nine of these large centers are east and four of them west of Chicago. The closest is Detroit, 219 miles; the farthest, San Francisco, 1856 miles; their average, 716 miles. They furnish 51% of the Chicago traffic. A similar view of the major cities could be visualized by using any one of them as the hub.

## Qualifications of Distance

Qualifications of the factor "distance" also should be considered:

1. Time Saved. The principal question facing the traveller in deciding whether to go by air is how much time he will save between two cities. Instead of distance, therefore, time saved might be included in the formula.

2. Cost of Service. The difference in cost between air travel and rail travel is another important factor that should be considered.

3. Number of schedules. The number of schedules has considerable influence. A study of the cities under consideration shows that those with the highest traffic generation do have more available schedules by air than by rail.

4. Quality of Schedules. What constitutes an attractive schedule? Most people seem to agree that time of arrival and departure are most

important. If a train or plane brings a person to his destination after midnight, the schedule is very weak because hotel accommodations are not held after that time, and women especially hestitate to arrive in a strange city during the hours after midnight. Early morning planes from large cities seem to be unpopular although they can leave smaller places earlier, especially if they arrive at their destination in time to do business and return to the home city in the evening. All daytime schedules are better than schedules departing after 10 p. m.

The number of stops would be important, although in most cases the time required for the trip reflects (i. e., the fastest plane usually makes no stops, etc.,) the number of stops. Type of plane or train would also be important, and this comfort factor is difficult to measure, but speed again reflects comfort since the faster the plane or train, the more modern and comfortable it usually is.

5. Direct Connections. Planes or trains that require no change between origin and destination are also more popular. This possibly accounts for the low generative power of New Haven, since many people may purchase air tickets from New York because of the superior air service available from that terminal.

6. Terminal to terminal. Schedulers seem to agree that practical problems determine the schedules. In the first place, if a city is fortunate enough to be on a run from one large city to another large city, it will receive more service from the plane or train. So people in those cities will prefer the type of transport that renders the better service. Eventually as traffic increases, shuttle service between cities will be more feasible for the smaller planes than for the larger train, since the plane is more like the size of the bus and does not require as many passengers per trip as per train.

Other practical factors, of course, reflect the difficulty of keeping the plane at the right place at the right time and in getting the crew at the proper location so that employees are not away from home too long and yet work the correct number of hours under labor contracts.

### *Chicago Traffic Pattern*

Cities with the most passengers from Chicago are not always the places with the most air traffic in the United States. For example, Detroit, which ranked second in its Chicago traffic, was sixth in the nation and Minneapolis, third with Chicago, nationally was thirteenth.

New York was first on both lists, but Los Angeles was thirteenth with Chicago and third in the nation. Chicago, itself, was the second largest nation-wide air traffic generator. Detroit, second with Chicago, was sixth nationally. When a city has a high percentage of its traffic with Chicago, such as Indianapolis with 22.8%, it ranks much higher with Chicago than it does nationally. In this case it was ninth on Chicago's list but twenty-eighth in national air traffic. Opposite to this was Atlanta, Georgia, with only 4.4% of its traffic with Chicago and twenty-second on that list whereas it is ninth in the nation.

Nearby cities usually are higher and communities usually fall in rank as the distance grows. The averages by distance of the percentages of each city's traffic with Chicago follow:

TABLE 2
AVERAGE PERCENTAGES OF TRAFFIC OF EACH CITY BY MILEAGE GROUPS

| Mileage | Average | Mileage | Average | Mileage | Average |
|---|---|---|---|---|---|
| 0-99 | 12.6 | 800-899 | 2.3 | 1600-1699 | 1.4 |
| 100-199 | 27.6 | 900-999 | 2.3 | 1700-1799 | 1.3 |
| 200-299 | 20.7 | 1000-1099 | 3.5 | 1800-1899 | 1.9 |
| 300-399 | 13.7 | 1100-1199 | 3.3 | 1900-1999 | 1.0 |
| 400-499 | 7.0 | 1200-1299 | 2.8 | 2000-2099 | 1.0 |
| 500-599 | 5.2 | 1300-1399 | 2.4 | | |
| 600-699 | 4.3 | 1400-1499 | 3.7 | | |
| 700-799 | 3.1 | 1500-1599 | 2.0 | | |

The bulges between 1000 and 1200 miles were caused by the Florida cities and the one between 1400 and 1499 by Tucson and Phoenix, Arizona. If tables of this kind were prepared for other cities, generalizations might be discovered.

An inspection of each distance group showed some cities lower and some cities higher than the average. In many cases higher cities seem to be the more populous centers like New York City, Minneapolis, Kansas City, Philadelphia, the cities in the northwest, Florida, Arizona and California, a few industrial cities and some of the smaller nearby cities. Cities having smaller percentages of their traffic with Chicago would require individual study of the traffic of each. Two groups stand out: those in upper New York state, New England, especially resort cities like Hyannis, and those in Ohio. The first question on individual studies would be where the highest percentage of the traffic for these cities goes. Cities with below average traffic in each distance group are: 0-199 miles: Milwaukee 5.7; Ft. Wayne 13.9; Detroit 15.1; 200-299 miles: Toledo 16.6; Cincinnati 13.5; St. Louis 15.9; Evansville 11.1; Columbus 12.1; Mansfield 10.9; 300-399 miles: Ottumwa 0.9; Nashville 5.3; 400-499 miles: Waterloo 1.3; Erie 2.8; Mason City 3.3; Johnstown 2.1; 500-599 miles: Cumberland, Md. 2.4; Elkins, W. Va. 2.1; Bellefonte, Pa. 2.4; Clarksburg, W. Va. 1.5; Hagerstown, Md. 2.2; Elmira, N. Y. 2.3; 600-699 miles: Hutchinson, Kan. 1.8; Grand Forks, N. D. 1.1; Watertown, N. Y. 0.9; 700-799 miles: Anderson, S. C. 0.6; Massena, N. Y. 0.5; Garden City, Kan. 0.9; Texarkana, Ark. 1.7; Albany, N. Y. 1.5; Mobile, Ala. 1.2; 800-899 miles: Monroe, La. 1.0; Mineral Wells, Tex. 1.0; Meridian, Miss. 0.9; New Bedford, Mass. 0.6; Baton Rouge, La. 0.7; 900-999 miles: Glens Falls 0.3; Hyannis, Mass. 0.3; Burlington, Vt. 0.4; 1000-1099 miles: Augusta, Me. 0.2; 1100-1199 miles: Midland, Tex. 0.7; Bangor, Me. 0.8; 1200-1699 miles: Helena, Mont. 1.3; El Paso, Tex. 1.8; Provo, Utah 1.0; Pocatello, Ida. 0.4; 1700-1899 miles: Walla Walla, Wash. 0.6. Those with above average traffic are: 0-199 miles: Kokomo 39.8; Grand Rapids 37.1; Moline 36.7; Springfield, Ill. 35.4; 200-299 miles: Richmond 31.2; Hannibal 27.6; Eau Claire 27.2; 300-399 miles: Cheboygan 28.8; Rhinelander 27.9; Minneapolis 20.8; Sault.

Ste. Marie 21.8; 400-499 miles: Kansas City 12.1; Omaha 12.4; Springfield 14.0; Lincoln 13.1; Duluth 21.4; 500-599 miles: Fargo, N. D. 11.7; Hot Springs, Ark. 20.3; 600-699 miles: Allentown, Pa. 14.6; Jamestown, N. Dak. 10.0; Philadelphia, Pa. 8.6; 700-799 miles: New York, N. Y. 8.7; Bismarck, N. D. 7.3; Hartford, Conn. 6.4; 800-899 miles; Tallahassee, Fla. 3.6; New Orleans 3.9; Rapid City, N. D. 6.3; Minot, N. D. 4.8; Jacksonville, Fla. 4.2; Brunswick, Ga. 4.7; 900-999 miles: Denver, Colo. 4.9; Daytona Beach, Fla. 5.4; Colorado Springs, Colo. 4.7; Orlando, Fla. 4.3; 1000-1099 miles: Tampa, Fla. 9.1; San Antonio, Tex. 6.5; San Angelo, Tex. 5.9; 1100-1199 miles: Miami, Fla. 11.5; Palm Beach, Fla. 5.3; 1200-1699 miles: Bozeman, Mont. 5.5; Brownsville, Tex. 4.3; Phoenix, Ariz. 6.4; Tucson, Ariz. 9.9; 1700-1899 miles: Los Angeles, Calif. 2.9; San Francisco, Calif. 4.0.

Quite often this large percentage of traffic shown by nearby cities when the service first starts, gradually decreases in later years. As shown by the comparisons between recent traffic and in 1940, most of the cities showed a smaller percentage of their traffic with Chicago in the months studied than in 1940. The few exceptions to this were: both nearby and eastern industrial centers and some Michigan, North and South Carolina cities.

The ten cities with the most traffic with Chicago had more than half of that traffic and the first forty cities had 83% of the Chicago passengers.

## Conclusion

The formula, proposed by the C.A.A., contains some basic merit, but does not cover all cases. The answer of course, may be that it fits potential and not actual traffic. That remains to be seen. Since the differences in actual traffic among the cities are so great, they must be explained by other exceptions than have so far been advanced.

Complaint should also be made about the hazy presentation of the theory in many places, which creates difficulty in following the ideas and the proof. For example, exactly how the concept of economic character of cities was proved has never been published. This idea which was conceived originally for real estate, should be modified for use in air transportation. Marketing and industrial cities might as well be combined, but separate categories should be established for gateway, resort, governmental and transportation cities. Purchasing power should be given more weight.

The same criticism applies to the application of the formula to the traffic between Chicago and each of eleven balanced cities. Since figures employed were indicated very indefinitely, a check of their accuracy was very difficult. Several places were omitted and, in one case, the rank of cities was reversed. When certain cities are selected from the list and other communities are omitted, the formula appears more plausible than when all cities are considered.

When all the places are included, the question arises as to whether

the population of the entire suburban area or that of the central city should be employed and as the size of the community becomes smaller, this question becomes more important. As the first definition of metropolitan areas by the 1950 census used the county as the basis, the question arose whether the county should not be the unit for those cities under 50,000. The census should provide some term that includes suburban population for those places under 50,000 or else an arbitrary method should be used, because these cities are as much suburbanized as larger communities. This paper discovered that in the case of the few cities investigated that if only about one-half of the population outside the central city were used, the order was more like their rank on the basis of actual air traffic. More research in this area should be carried out, however, and this study could take the form of the origination of airline passengers relative to airports.

Suggestions were considered for the modification of the distance factor in the formula. On the cities studied, flying or transport time saved did not seem as important as number of schedules provided, but many more routes should be compared to establish this relationship. Cost of service and direct service with no change of plane also are very important. At the present time, airline scheduling still follows the railroad concept of large terminal to large terminal traffic. If the actual passenger travel on each schedule were available for research, it would be worthwhile to consider whether more shuttle service might be introduced between certain cities where traffic justifies it. The airline has a natural advantage over the railroad, because it does not require as much traffic for one plane as a railroad does for a train. Airline scheduling, from the traveller's viewpoint, is a field that seems to be untouched and could be given much more thought.

What were the more specific conclusions discovered in this paper and especially what were those relating to the air traffic pattern of Chicago.

1. Resort cities such as those in Florida, Hot Springs, Phoenix and Tucson, have a high percentage of their traffic with Chicago. However, resort cities on the east coast attract very little Chicago traffic, so the conclusion is that each resort city draws its clientele from a particular section and that a definite map could be drawn showing each resort city as a hub for traffic from a particular region or several regions.

2. Governmental cities, such as state capitals, do not rank high in their traffic with Chicago. These cities could be studied to see whether their traffic is larger with other governmental cities than with balanced and industrial centers. Such a study should notice that some of the state capitals are a combination of people with different interests and are not as typical as others.

3. Industrial cities in many cases exchange with Chicago a high percentage of their traffic.

4. High traffic producers among industrial cities are those close to

Chicago, while high traffic producers among marketing and institutional centers are at a long distance.

5. No marketing centers exist according to the C.A.A. in Ohio, Michigan, Illinois, or most of New England, or Indiana. Most of these marketing centers are west of Chicago.

6. Geographic regions, highest as traffic producers for Chicago, are the northwestern states, Washington, Montana, and the Dakotas; the southwestern states, Arizona, Arkansas, Oklahoma and Texas; and Florida. Those directly west such as Kansas City and Denver, are slightly below these.

7. Cities that had no air service in 1940 are lowest on the list of traffic producers.

8. Geographic situations of other large cities over one million, using Chicago as a hub, show that Detroit is closest, 219 miles and San Francisco farthest, 1856 miles. Nine of them are east and four of them west of Chicago. They furnish 51% of the Chicago traffic.

9. Cities between 100 and 199 miles average 27.6% of their traffic with Chicago; between 200 and 299 miles, 20.7%; 300 to 399 miles, 13.7%; and below 900 miles from 1 to 2% of their traffic.

10. As the distance from Chicago increases, the cities with a higher percentage of their traffic with Chicago are the larger cities, and the percentage of the traffic of the smaller communities decreases rapidly as distance increases.

11. Cities with the largest traffic with Chicago are: (1) New York; (2) Detroit; (3) Minneapolis; (4) Miami; (5) St. Louis; (6) Washington; (7) Cleveland; (8) Kansas City; (9) Indianapolis; and (10) Cincinnati. These first ten cities furnished 52% of the Chicago traffic and the highest forty cities 83%.

12. Most cities have a lower percentage of their own traffic with Chicago than in 1940, although there were a few exceptions.

13. A very noticeable decrease in the percentage of the traffic of Minneapolis, Detroit, St. Louis and Kansas City with Chicago leads to the question whether this is realignment of the traffic pattern in the country and whether people from these populous middlewestern cities may be by-passing Chicago by air more often now than in 1940 or simply whether the air service by-passes Chicago more than in 1940.

14. This study may be used as a model for other studies of cities in the United States, so that eventually a rather complete picture of the air traffic pattern in the country may be drawn.

# SCANDINAVIAN AIRLINES SYSTEM COOPERATION IN THE AIR

By Robert A. Nelson

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SCANDINAVIAN Airlines System pioneering in commercial polar flying in recent months has demonstrated again its aptitude for innovation in the field of international commercial aviation. With its formation in February 1951, SAS became the first — in the sense of ownership — international air carrier. Denmark, Norway, and Sweden had decided that they could best meet their needs in civil aviation by cooperation, and in its two years of existence, SAS has borne out the judgment of its creators. Owned jointly by the three Scandinavian countries, SAS has no parallel in aviation and few in the realm of business.

SAS is one of the world's big airlines with routes extending across Asia to Tokyo, to South Africa, and North and South America. A large part of its traffic of course moves within Western Europe. At the time of the final step in 1951 in the evolution of SAS, the airline had fifty-nine planes and had placed orders for more. In the accounting year October 1, 1950 to September 30, 1951, SAS flew 26,287,000 kilometers and carried 481,697 passengers. It has been among the leading carriers on the North Atlantic route, more than holding its own in United States-Scandinavian traffic.

Three phases marked the joining of three national airline companies into a single operating unit. In 1946 Danish Airlines (DDL), Norwegian Airlines (DNL), and Swedish Intercontinental Airline (SILA) formed a consortium for intercontinental flying. The companies continued to carry on European and African operations separately until 1948 when they fashioned a pooling arrangement for that traffic. Having by then gone a considerable way toward complete unification, and being dissatisfied with the multiple organization form, the three airlines in 1951 merged their airline activities.[1]

The SAS development is significant and worthy of evaluation because (1) It reflects the impact of legal-economic-political forces in international aviation. SAS is an evolutionary product of these forces. (2) It represents economic cooperation for at least a part of Western Europe. This article deals with the formation of SAS, the factors which induced its formation, the general place and impact of SAS in

[1] The name Scandinavian Airlines System was used from 1946 to 1948 to apply to the consortium. From 1948 to 1951 all three companies used this name in their external relations. After 1948 within the organization the term Scandinavian Airlines System-Overseas Division was used for the consortium and Scandinavian Airlines System-European Division for the European pooling.

international aviation, and a discussion of the problems which inevitably arise in an attempt at economic cooperation.

Because of the limitations and restrictions on international air transport imposed by right of national sovereignty over airspace, small nations tend to have small airlines. Negotiation on bilateral air agreements is on a *quid pro quo* basis, often working to the disadvantage of the smaller nations. The large powers with greater populations and population concentrations contain the air traffic centers of the world. The airlines of small nations are obliged, in order to provide adequate service, to fly to such traffic centers as Paris and London. Airline nations of big powers, however, are not under the same compulsion to maintain connections to points within the borders of small powers. The terms of air agreements between large and small powers tend to reflect the relative aviation strength and needs of the parties.

Thus a small power may be somewhat circumscribed in the scope of its air operations. Norway, for example, cannot on a sound economic basis have the third largest air fleet in the world as she does a merchant marine.

Several factors however make small airline establishments undesirable even to small nations. The economics of contemporary airline operation favor large carriers. Over a considerable range, unit costs decline appreciably with increases in the size of the plane and the fleet. Secondly, a nation with widespread trade relationships may find necessary an airline with extensive connections throughout the world. In that airlines are instruments of commerce, nations with expanding trade may want their airlines to keep pace. Thirdly, commercial aviation is closely related to national defense. Commercial airliners will undoubtedly have great and immediate utility in any future war. In so far as planes necessary for defense are employed commercially for income, a reduction in defense cost results. Small nations thus face the dilemma that relatively large airlines are economically desirable, but because of international restrictions on air transport, difficult to attain. The three countries have found that many of the disadvantages of their individual small size can be overcome by joint operation and that the loss of individual autonomy over their air establishments is not too great a price to pay. The decision to combine air establishments came after five years' experience of limited cooperation and ten or more years of its consideration. The 25-year term of the present agreement indicates the faith of the three countries in their joint project.

In February 1951 representatives of the three national companies, Danish Airlines (DDL), Norwegian Airlines (DNL), and Swedish Airlines (ABA), signed a consortium agreement. Under its terms, the three national companies contribute their assets in the ratio 2:2:3 respectively to an operating entity, known as Scandinavian Airlines System. The three companies carry on no airline operations individually, but rather function as a kind of holding company. In essence, the consortium is a partnership of the three limited liability share com-

panies incorporated within each country. The consortium Scandinavian Airlines System has no separate nationality, being subject in some ways to the laws of all three nations.

The fusing of the national companies into a single operating entity directly involves the three Scandinavian governments as part-owners and as underwriters. At present, each state owns 50 percent of its company participating in SAS. Also the governments have agreed to provide limited financial aid during the initial period of adjustment and development. It is presumed by the governments that ultimately SAS will be completely self-supporting.

The three companies separately have long operating histories. Danish Airlines (DDL) competes with Royal Dutch Airlines (KLM) for the distinction of being the world's oldest airline. Before and after World War II, the three companies exercised practical, if not always complete, monopoly over their countries' international air transport. Each company, being partly a state investment, has been a "chosen instrument" airline. As the size and the importance of the State's investment in air transportation has increased, each government has played a more and more dominant part in its company's activities. SAS represents an interplay of public and private initiative.

## Earlier Experience with Cooperation

Danish Airlines (DDL), Norwegian Airlines (DNL), and Swedish Airlines (ABA) had considered and experimented with cooperation as early as 1938. Much of the initiative came from Norwegian Airlines which aspired to a North Atlantic service. In the mid-thirties after unsuccessful negotiations with Pan-American Airways, DNL recognized that Norwegian traffic was too small to support commercial flights. In 1939, DDL and ABA were persuaded to join with DNL in considering a joint North Atlantic operation.

Planning was carried to the point of sending representatives to the United States to arrange for landing rights, equipment, and navigational facilities. The advent of war to Denmark and Norway in April 1940 blotted out all preparations for the immediate future. Nevertheless much had been achieved by way of mutual understanding of the problem and in working relationships among the participants.[2]

During the latter stages of World War II, discussions concerning cooperation on the North Atlantic were resumed. This time negotiations were carried on in an atmosphere of great optimism looking to the post-war "air age." An urgency was felt to have an organization in existence for the purpose of exploiting early opportunities after the War. However uncertainties about the Norwegian post-war government's policies prevented actual agreement until the middle of 1946.[3]

Swedish representatives led the way in these latter negotiations partly because of Sweden's neutral position which permitted such ac-

[2] Storting Proposition No. 12, 18 January 1946, Oslo, Norway. Om medvirkning til dannelse av nasjonalt luftfartselskap til drift av luftruter. p. 4.
[3] SAS Special DIP 5. 108 pp. 1-4.

tivity and partly because Swedish businessmen had become interested in commercial aviation as a vital factor in international trade.

In 1943, Swedish Intercontinental Airlines (SILA) was formed by private interests to carry on overseas activity. This action was necessary because the government-owned airline ABA[4] was then unwilling to incur the risks of pioneering overseas flying.[5]

At the end of World War II, Sweden's airlines had a very considerable advantage over all the other airlines of Europe in respect to organization, airport and maintenance facilities, and trained crews. If after the War the concept of the full five freedoms[6] had prevailed as an international concord, SILA and ABA would have held an enviable competitive position. In all likelihood, Norway and Denmark would have found their international traffic being carried by Swedish companies. At the Chicago Conference in 1944, the Air Transport Agreement was drawn up which would multi-laterally grant the five freedoms to the signers. However, the number of nations, including Sweden, who ratified the agreement was not enough to bring it into force.

The prospect of bilateral bargaining based on positions of strength in the post-war era acted to pull the airlines of the three countries together. Sweden recognized that the obstacles to her airline expansion would be large enough without being checkmated by Norway's and Denmark's airlines. It was better to combine than compete. Furthermore, plans for the North Atlantic traffic called for use of the huge 75-100-passenger Boeing Stratocruiser promised for delivery in 1947. Scandinavian aviation experts believed that the only existing airfield in Scandinavia which could safely accommodate the Stratocruiser was at Sola[7] Airport built up by the Germans at Stavanger on the southwest coast of Norway.[8] The limited accessibility of the Stratocruiser within Scandinavia and the need for a sizeable traffic volume for its use were factors favoring cooperation.

The form and terms of cooperation on North Atlantic service were agreed upon in August 1946. In the interest of efficiency, the three airline companies rejected the conventional pooling arrangement and turned to the consortium form of organization, familiar to shipping

[4] A close working relationship was maintained between SILA and ABA until July 1948 when the two merged under the name ABA.

[5] *Ibid.* p. 1.

[6] The varying degree of privilege extended to foreign air carriers is expressed by the rather euphemistic phrase "five freedoms of the air." The first freedom permits innocent passage through air space. The second, landing for non-commercial purposes. The third and fourth freedoms refer to the privilege of carrying commercial traffic between a second nation and the homeland of the airline. The most desirable and therefore most jealously guarded freedom is the fifth, the privilege of carrying traffic between nations other than the homeland of the airline.

[7] It was expected that shuttle operations would be carried on between Sola and other points in Scandinavia.

[8] Fremstilling av hovedtrekkene i Det Norske Luftfartselskap A/S's utvikling 1946-1948 og forslag til retnignslinjer for selskapets fremtidige virksomhet Oslo, 14 January 1949, p. 91.

people in Scandinavia.[9] The agreement setting up Scandinavian Airlines System (the first SAS) was to be in force for five years until December 31, 1951, unless terminated earlier by action of the parties.[10] Although conduct of North Atlantic traffic was the prime objective of the consortium, provision was made that SAS should also carry on South American traffic (later amended to include Far Eastern).

The consortium SAS was to carry on most of the normal activities of an airline in its own name. However, ownership of the airplanes used by the consortium was retained by the parent companies. Each company received an agreed payment for the use of the aircraft and was responsible for its heavy maintenance.[11] The interests of the parties were divided 3:2:2 to Swedish Intercontinental Airlines (SILA), Danish Airlines (DDL), and Norwegian Airlines (DNL) respectively. The proportion represented a compromise of SILA's greater resources and the unwillingness of DDL and DNL to be dominated in the consortium by SILA. Each company had two members on the board of directors of the consortium.[12]

The consortium was considered by its members to be a success. Operations were extended to South America in early 1947 and in 1949 to the Far East. The headquarters were set up in Stockholm and personnel were recruited aiming for a reasonable division between the three nationalities. A considerable "esprit de corps" was generated within the organization and contributed to its success. The headquarters were located in Sweden where the higher wage and salary level obviated any problem of differences in that respect between the three countries. By and large, representatives of the three nationalities worked well together and traditional animosities, if they existed, did not flare.

An eventuality which nearly shattered the first SAS structure, and which in so doing forced the Scandinavian airlines to greater cooperation in Europe in order to protect the consortium agreement, concerned airplane maintenance. Each of the three airlines, supported or directed by its government, desired that some overhauling of the SAS fleet be performed at its installations. This was for reason of national defense, use of existing facilities, and so on. However, it appeared after the first year of operation that very little SAS maintenance would go to Norwegian Airlines. Bromma Airport at Stockholm was declared technically capable for the landing of Stratocruisers, contrary to earlier supposition. Furthermore, the Norwegian government had failed to build at Sola necessary additional facilities for the basing of large planes.[13]

Norwegian Airlines' officials became perturbed at the trend of

[9] The consortium form as used by SAS is essentially a partnership of share companies.

[10] Konsortialoverenskomst (Consortium Agreement) signed in Oslo, 21 July 1946. par. 1.

[11] *Ibid.* par. 4.

[12] *Ibid.* par. 3.

[13] *Op cit.* Fremstilling av hovedtrekkene pp. 90-92.

developments. An intrinsic aspect of cooperation was the sharing of maintenance. Since maintenance performed in Sweden was paid for in hard currency it constituted a real burden upon Norwegian Airlines and on the Norwegian economy.

In order to salvage the overseas cooperation, an admitted success, the three airlines decided to extend the cooperation to European service. By this means maintenance of two-motor planes could be allocated to Norwegian Airlines. Along with a more satisfactory division of maintenance, it was believed that cooperation on European traffic would permit the elimination of duplication in service and sales effort.[14] A provisional pooling arrangement was put into effect in April 1948, pending more careful working out of details. In June 1949, the three companies signed a two-year agreement for European cooperation. However this agreement was never fully approved by the Norwegian government and was permitted to go into force on condition of termination as soon as possible.[15]

The European cooperation, known as Scandinavian Airlines System-European Division (E-SAS), was kept separate from the consortium which now became known as Scandinavian Airlines System-Overseas Division (O-SAS). In the E-SAS pool the individual company organizations were kept intact. Superimposed on them was a planning and selling agency called E-SAS, set up in Copenhagen with responsibility to a joint board of directors of the three companies.

The E-SAS arrangement essentially involved independent operation by the three lines, Swedish Airlines, Norwegian Airlines, and Danish Airlines. Each carrier was responsible for its own costs except those incurred jointly, as in the E-SAS agency at Copenhagen and at installations outside Scandinavia. Operations were planned and joint cost shared on the same 3:2:2 ratio, used in O-SAS.[16] All the income from European operations, excepting each country's domestic routes, was pooled and divided on the basis of the ton/kilometre performance of each carrier. The carrier having the largest volume of offered ton/kilometres, regardless of passengers carried, received the largest return from the pooled income.[17]

The E-SAS cooperation reflected the extemporaneous nature of its formation. Its organization was an administrative monstrosity. Unlike O-SAS where all activity was for joint account, it was possible in E-SAS for one party to exploit its own advantages to the detriment of the other two.

Norwegian Airlines, particularly, was dissatisfied with E-SAS.[18] The maintenance of DC-3's which was to come to Norway through E-SAS

[14] *Ibid.* p. 11. Also Pro Memoria from DNL Board of Directors to Boards of DDL and ABA 18 March 1949.

[15] Storting Proposition No. 138 17 November 1950 Oslo, Norway.

[16] Traffic Agreement of 25 June 1949 between A. B. Aerotransport, Det Danske Luftfartselskab A/S and Det Norske Luftfartselskap par. 8.

of a rule.

[17] *Ibid.* par. 12.

[18] Pro memoria from DNL Board of Directors to Boards of DDL and ABA 18 March 1949.

was delayed. DC-3's belonging to Swedish Airlines were never sent to Norway for maintenance, and Danish Airline's DC-3's were not turned over to Norwegian Airlines for maintenance until the summer of 1949.[19] Officials of Swedish Airlines stated that their government, for defense reasons, would not permit maintenance of DC-3's to be performed outside of the country. Of indeterminable importance is the fact that Swedish Airlines had at that time considerable excess capacity in its workshops at Bromma, Stockholm. In any case, Norwegian Airlines had to pay maintenance charges for its DC-6's in Stockholm and DC-4's in Copenhagen for well over a year before it got any compensating maintenance in its own shops.

The income pooling arrangement turned out to be a source of friction and cross purposes. Since costs were borne individually, it became apparent quite soon that the advantage for each company would be to have that operation which yielded the lowest cost per ton/kilometre, however small the traffic volume. The most desirable operation was with a large plane on a long haul with few stops, building up a large number of performed ton/kilometres at relatively low unit cost. To make the problem more acute, the three companies' fleets were not uniform as to plane type. Swedish Airlines alone had DC-6's which were put into use on longer routes to Southern Europe. Norway and Denmark had no DC-6's in European traffic and fewer DC-4's than the objective 3:2:2 relationship between the carriers. The resultant pulling and hauling for the best routes and schedules seriously strained the cooperation.[20] No action could be taken unless there was unanimous agreement between the companies. To the limited extent that E-SAS operated, it had to serve three masters. Executives of the three companies spent their days in conference and correspondence with their opposite numbers in the other companies, thus neglecting their regular functions. The atmosphere of difference and dissension contributed little to efficiency of operation.

The experience of the pooling arrangement E-SAS indicates that such a setup for cooperation tends to be unworkable. If organizations are meshed together in their activities, it should be done on joint account so that one party may not profit at the other's expense. The contrast between the success of O-SAS and the misfortunes of E-SAS is quite apparent. The shortcoming of E-SAS was that it went beyond simple pooling, as often practiced by European airlines, yet attempted to preserve the operating entities of the parties.

In the spring of 1949, the Norwegian government came to the conclusion that commercial air transport was costing the economy too much. It was decided that Norwegian Airlines' activities would have to be cut down to reduce the annual loss. (Deficit of $3 to $4 million in 1948.) Government officials believed that participation in E-SAS involved a greater commitment than Norway could afford. Norway

[19] Verdens Gang, Oslo, Norway, 14 November 1949 "Norwegian Aviation at the Crossroads."
[20] Memorandum from DNL Board to DDL and ABA.

had small interest in some of the E-SAS routes in southern Europe and the Mediterranean on which traffic was thin and losses were suffered. Through the income pooling provision, part of the burden of maintaining these routes was shifted to Norway. Accordingly, in the discussions carried on during the spring of 1949, Norwegian Airlines proposed a looser form of cooperation of the more conventional pooling type which would permit greater control over expenditures.[21]

However DDL and ABA strongly opposed a partial liquidation of the cooperation, and after a period of testing of position the companies decided in August 1949 that if the Norwegian government would not continue the existing European cooperation as proposed, it might be possible to construct some form which would be more acceptable to Norway and all parties concerned. A committee of three, the "Little Committee," was appointed from the boards of directors of the three companies to investigate the feasibility of various alternatives.

The "Little Committee" submitted its report in December 1949. It recommended that the three companies form a consortium to carry on all their air activities.[22] The boards of the companies accepted the report as a working document for the carrying on of negotiations at the company and government level. From December 1949 to November 1950 there was discussion and conference within the companies and the government as to the feasibility, the form, and the implementation of greater cooperation.

To some extent the "Little Committee" report rationalized and justified decisions already made. The Norwegian government had decided in September and October 1949 that Scandinavian cooperation, for political reasons, had to continue.[23] This was probably a key decision in the whole later SAS development. Since E-SAS was unsatisfactory from the point of view of efficiency and effectiveness, it had to be scrapped. Without public aid the Norwegian company would have had to curtail its activities drastically. The decision by the Norwegian government to support stronger cooperation — and that involved the necessity of making certain concessions to Denmark and Sweden — made the big SAS a practical possibility.

After the report of the "Little Committee" was rendered, the three governments actively entered the negotiations. Accomplishment of so radical[24] a plan for cooperation required immediate government participation. Also by the middle of 1950, as a result of mergers and reorganization, the Norwegian and Swedish governments had come to hold 50 per cent of the capital shares in their respective companies.

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[21] *Ibid.*

[22] Betänkande Angaende Det Skandinaviska Luftfartssamarhetet Utarbetat av Einar Isdahl, Oslo; Per Kampmann, Köbenhavn: Marcus Wallenberg, Stockholm, December 1949.

[23] This conclusion was derived by the author from personal interviews with Norwegian government officials.

[24] It should be emphasized that up to this time (1950) the three airlines were run as three separate national companies. O-SAS was thought of as a special case. Therefore the idea of one airline for three countries was still a radical one both to company personnel and to government officials.

Thus the governments entered negotiations, both as shareholders in the companies and as controllers and protectors of the public interest in aviation.

Inasmuch as the governments were involved, the public of the three countries was involved. Particularly in Norway, the SAS issue flared out in public controversy. In all three countries there were groups in the airline companies and in the governments who, for private or patriotic reasons, opposed SAS. The strength of the criticism and public concern was sufficient in Norway to force the three companies to append a so-called "aide memoire" to the proposed SAS agreement. The "aide memoire" protected vital national interests by assuring each country its established proportion of employees, maintenance facilities, and so on.[25]

On November 8, 1950, the responsible ministers in the governments met and endorsed the agreement as proposed by the three companies. As the agreement involved an appropriation of funds, it had to be approved by the legislative bodies of each nation. Last to approve, the Norwegian Storting voted in favor of SAS January 23, 1951, and on February 8, 1951, with accompanying fanfare, the final documents were signed, which made close-knit Scandinavian air cooperation a reality — in form anyway.

## The Expanded SAS

The new cooperation has taken the form of a 25-year consortium. Under its terms, all Scandinavian international air transport is carried on by SAS.[26] Domestic air transport is provided for on a contract basis, the governments' having the right to utilize other carriers than SAS if they see fit. Thus the national companies are now paper organizations, in a sense holding companies in the consortium venture.

In legal form, the "big" consortium is like the former overseas consortium, *i.e.*, the parties are "jointly and severally liable" to third parties. Six members chosen from each of the companies' boards of directors comprise the board of the consortium. The top executive officer of the consortium bears to the board, employees, and third parties the same relationship as does the president of a corporation.[27] The executive office bears the marks of compromise to nationalistic concern in that the managing director has two assistants who, according to the "aide memoire" (the supplement to the consortium agreement), will be of different nationality from each other and the managing director. Thus down to the executive level, each country has a representative to uphold its interest. This arrangement may inhibit freedom of the executive function which traditionally resides in one man. In that case, it may be labelled a cost of cooperation.

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[25] *Op. cit.* Storting Proposition No. 138 17 November 1950 Oslo, Norway.

[26] A Norwegian company, South American and Far East Airlines, holds a concession from Norway to the Far East. The concession runs out in 1954 and will probably not be renewed.

[27] Consortium Agreement 8 February 1951, pp. 2, 7.

The SAS agreement forged out of experience is a strong document intended to hold the parties together for 25 years. It contains penalties for withdrawal except where withdrawal is necessary because of grave national emergency. For example, the withdrawing party or parties is denied the further use of the name SAS, while the remaining party or parties may continue with cooperation under that name. Also a withdrawing party may not receive any value for goodwill. The interest shares are again Swedish Airlines, Danish Airline, and Norwegian Airlines 3:2:2 respectively.[28]

Several terms of the agreement are worth noting. It is stated that the activity of the consortium shall be governed by "sound business considerations, practice, and policy." Further stated, "the Consortium shall make every effort towards allocating in a reasonable way, the business activities of the Consortium between the three countries.[29] Such phrases indicate the desire of the framers of the agreement to minimize political-nationalistic considerations as much as possible in the operation of the consortium. However, the realities of national interest are interposed in the "aide memoire" qualifications which state that "the business principle in certain cases must yield in order to preserve and enhance the Consortium's Scandinavian character and in order to consider national interest." Furthermore, it is "appropriate to use the phrase 'in a reasonable way' " as a flexible "expression of the desire to come as soon as possible to the relationship 3:2:2." Provision is made in the "aide memoire" for workshops as follows: "a tolerable division according to the relation 3:2:2."[30]

The above terms reveal the clash and compromise of national considerations and the desire to make the consortium as efficient as possible. Undoubtedly there will be some "costs" of cooperation, that is, costs which would not be incurred if SAS were a private company without national complications. For example, it might be preferable to concentrate all workshop activity in one of the three countries instead of apportioning it over the three. Administrative and operating organizations have to be maintained in each of the three countries. The position of Norway in the SAS routenet probably does not justify a regional establishment of the size that will be maintained for reason of national requirements. These are costs of cooperation. In the words of a Company executive, it will be some time before SAS costs are reduced to those of a comparable national company. On the other hand undoubtedly, there will be savings over separate individual operations by the three companies.

## Legal Problems

Knotty legal problems are raised by the consortium agreement. For instance, one concerns liability to third parties. Presumably a damaged party would sue one of the three companies in the courts

[28] *Ibid.* pp. 15, 2.
[29] *Ibid.* pp. 1, 3.
[30] *Op. cit.* Storting Proposition No. 138, p. 5.

of that company's homeland. Since the companies are jointly and severally liable, judgment could net up to the extent of the one company's assets, including the investment in SAS. The sued company might then turn to the partners for their proportionate share of the damages paid. Difficulty could arise if the laws of the other two countries were different in respect to liability. In practice, the three companies may accept liability under the laws of all three countries.

Another problem concerns the functions and responsibilities of the managing director of the consortium. The agreement states that the managing director shall have the same powers and duties as are normally held by the General Manager (president) of a company.[31] However, the share company laws in the three countries differ. In Sweden the managing director has a stronger position in relation to the board of directors than in the other two countries. Probably the corporate laws of the nation in which the headquarters of the company is located will be applied.

At first the framers of the consortium agreement intended that the companies turn over to the consortium title to all their property, except real estate. The planes were to be registered on a 3:2:2 basis in each country, but title was to reside in the consortium. However, the Norwegian government decided that ownership by the consortium would not meet the legal requirement that aircraft registered in Norway be owned by Norwegian companies. Furthermore, the Ministry of Defense in Norway was not receptive to the idea that title of Norwegian planes which might be needed immediately in an emergency should pass out of Norwegian hands.

### Government Relationships and Control in SAS

The SAS consortium agreement necessitated agreements at the government level. A single air authority—a counterpart of SAS—was contemplated, but there were too many obstructions to such action. For the time being, it was decided that the aviation authorities in the three countries be directed to work closely with each other. It was also agreed that each country would accept automatically the certification of personnel and equipment made by the others. Cooperation between the air authorities extends only to those areas in which they individually have control. Some change in air laws was required to make controls within the three countries more uniform.[32]

How much joint action will be required on the part of the governments to facilitate the functioning of SAS is a matter of conjecture. It is feasible that as commercial aviation grows in economic importance cooperation may be induced in other areas. One such case has occurred with regard to customs. If SAS is to function efficiently, equipment, reserve parts inventory, and the general impediments of an airplane must be interchanged by the three companies. Each country has customs

[31] *Op. cit.* Consortium Agreement 8 February 1951, pp. 10.
[32] Odelsting Proposition No. 18, 9 March 1951, Oslo, Norway.

duties which are ordinarily levied upon entry on goods of the above nature. Thus a shipment of aircraft parts entering Sweden would pay duty, later be transferred to Norway, and pay another duty. In order to avoid this multiple taxation, the three governments have agreed that property of SAS will be subject to one duty at the time of entry into Scandinavia. Once in, there may be free movement through Scandinavia without levy.[33]

The building of SAS has required meetings and conferences at many levels both in business and government. From this experience, there is a continuing legacy of acquaintance, working relationship, and goodwill which will make further cooperation easier.

In each country control by the air authorities is mostly limited to technical licensing and inspection. The three governments depend for economic control upon their 50 percent representation on the boards of directors of the companies and on the board of SAS. The channel of control and information between the national legislative body and the company passes through the communications minister to the government appointees on the boards of directors. In so far as the companies are not required to make extensive published reports to the air authority, and since the annual report of the company to its stockholders is no more than cursory, the public must place its trust in the minister of communications and his representatives on the board of directors. It is generally accepted procedure in Scandinavian joint government-private corporations that the government representatives on the company board of directors consider the immediate interest of the company as primary. Where the company or consortium interest conflicts with that of the general public, as may be true in the case of subsidies, rental of public property, etc. the company is in a sense on one side of the table and the public on the other. The Scandinavians have had considerable experience with control by government corporate ownership. Nevertheless, there is disagreement within Scandinavian government circles as to its soundness and effectiveness as a sole means of economic regulation of commercial aviation.

It is feared that the SAS management may by the complexity of three-company participation, and consequent lag in action, become in a sense autonomous and unresponsive to government controls.[34] Experience with O-SAS and E-SAS evidenced that cooperation acted as a kind of insulating device between the active management and the controlling agencies. Oftentimes, the exigencies of a situation required policy-making before reference could be made back to the government and private interests for approval or disapproval. A policy or decision once made is sometimes not easily retracted. However limiting managerial prerogatives as a means of tightening the reins of government control would probably reduce the level of efficiency.

[33] An effect of this procedure will probably be to bring about uniformity of duties on aviation material, since otherwise import will tend to take place through that country which has the lowest level of duties.

[34] This impression was gained by the author in interviews with government officials.

## Why SAS was Formed

Undoubtedly the cultural affinities of the Scandinavian countries smoothed the way for cooperation; nevertheless, the reasons why SAS was formed were solidly based on the realities of economics and the international political climate.

### *Political Circumstances*

The political atmosphere in Scandinavia in 1950 was extremely favorable to the idea of SAS. Otherwise it is quite certain that it could not have been formed. SAS was politically attractive not because it was necessarily sound from the standpoint of commercial aviation, but because to the governments, cooperation was a desirable end in itself.[35] In the years since World War II, several projects for Scandinavian cooperation have failed to materialize. By 1950, the governments had come to feel an urgency to arrive at some form of economic cooperation, a will o' the wisp ideal rather unsuccessfully pursued by the Scandinavian countries for the last several decades.[36] The costs to one or more of the three have always overridden any advantages which might accrue.

Unquestionably the Marshall Plan program in Europe affected the SAS issue. A many-times-stated objective of the European Cooperation Administration was greater economic cooperation and integration between European nations. An OEEC resolution of 2 November 1949 stated that regional cooperation is in conformance with ECA objectives and should be encouraged.[37] ECA has placed a degree of pressure and suasion upon Western European countries to enter into various forms of cooperation, such as the European Payments Union and the customs unions. This pressure has often encountered determined opposition from national groups which might be adversely affected. At times such opposition has been embarrassing to the governments involved in their relations with American government agencies. Therefore when the Scandinavian governments perceived an opportunity for cooperation which would have quite limited impact within the economy and which might on balance prove economically sound, it was seized upon eagerly. In particular, the Norwegian government which had found itself in a dissenting position in negotiations on the customs union welcomed an opportunity to demonstrate its faith and belief in Scandinavian cooperation and its support of Marshall Plan aims.

### *Economic Considerations*

Although the governments supported SAS for political reasons, the most aggressive exponents of cooperation were the private interests. Prior to reorganization in 1950 Norwegian Airlines and Danish Air-

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[35] Kungl. maj:ts proposition No. 260, 17 Nov. 50, Stockholm, Sweden.
[36] Storting Proposition No. 138, p. 13.
[37] *Ibid.* p. 13.

lines were 80 per cent and 82.4 per cent privately owned, and Swedish Airlines after merger in 1948 with the Swedish company SILA, 50 per cent privately owned. The private groups proposed and supported cooperation on the supposition that: (a) A more efficient and extensive operation would result, and (b) Financing of such an extended operation could be more easily accomplished.

The greater efficiency of cooperation over separate operation was the reiterated argument of the promoters of SAS.[38] It is based on the presumption that none of the three national airlines has, or can develop, sufficient traffic to justify expansion to the scale of most efficient airline operation. In air transport, advantages of scale may be realized in terms of the size of the plane used and the size of the fleet operated. In setting up overseas cooperation in 1946 the three companies gave recognition to the probability that their individual traffic was inadequate to support the use of four-motor planes.

When the DC-3 was the most generally used plane for shorter distances, the three individual airlines could obtain satisfactory plane utilization. However, the shift by competitors to larger and more economic two- and four-motor planes placed pressure on the Scandinavian companies to do likewise. The three companies saw that, on a number of routes, cooperation would offer better utilization of the larger planes.

Probably the greatest economic advantage of cooperation lies in more efficient use of maintenance facilities and reserve parts inventories. In general, efficient utilization of workshops requires that a certain minimum number of planes of each type be maintained. It is uneconomic to have a workshop and spare parts for two or three planes. (Realizing that four planes would not justify extensive maintenance facilities, SAS Overseas sold its contract for Boeing Stratocruisers.) SAS cost analysts and statisticians have calculated that there should be at least eight to ten planes in each type to make efficient use of facilities set up for each type.

Obviously, neither Danish Airlines nor Norwegian Airlines could utilize fleets of eight to ten planes of each type needed for their operations. The advantages of cooperation in maintenance were apparent and availed of well before the final cooperation was achieved in February 1951. Planes used by O-SAS were consistently maintained at Swedish Airlines workshops in Stockholm, except for a period in 1948. By cooperation, further specialization is obtained. SAS planners expect to have three plane types, one of each being overhauled in each country. At present, DC-6's and DC-3's are maintained in Sweden, DC-4's and DC-3's in Denmark and Scandias and DC-3's in Norway.

Utilization of workshop facilities has constituted a major economic problem for Swedish Airlines and Danish Airlines. Both have workshop capacities quite in excess of the fleets which they have maintained. This situation results from the optimism which prevailed in

[38] *Op. cit.* Betankande Angaende Det Skandinaviska Luftfartssamarbetet.

aviation circles in 1945-46 and the fact that it was desirable to construct at one time adequate capacity for the future. In fact, the need to assure or guarantee use of their facilities in the future has been a factor in Swedish Airlines' and Danish Airlines' desire for cooperation.

Other economic advantages of cooperation are less apparent, although SAS leaders have pointed out many potential savings. They have calculated that elimination of duplication through cooperative sales effort, centralization of operations and administration will result in increased efficiency. However, there is some doubt that such efficiency will materialize. If SAS could operate completely removed from national considerations, these savings might appear. However, the control exercised by the governments through their representatives and the terms of the "aide memoire" may make them difficult to obtain. Regional organizations must be maintained in each country in order that there be trained administrative and operational personnel available in time of emergency. For example, seven to eight hundred people, exclusive of workshop employees, will be employed in Norway. In order to keep such a number occupied, functions which might better be performed at headquarters in Stockholm will be carried on in Norway. It is true that some attempt is being made to allocate certain functions to one or another of the regional organizations, thus permitting concentration and specialization. However, there are definite limitations to this procedure if the desired balanced organizations are to be achieved.[39]

The cooperation will realize definite economic advantages of overriding importance, such as improved utilization of the fleet and of maintenance facilities. On the other hand, certain costs will be incurred above those of a purely national airline of similar size to SAS. These costs may be labelled "costs of cooperation." They include: certain inhibitions of the executive function imposed by the multiple interests, government and private, in SAS; the necessity of maintaining to a considerable extent balanced airline organizations, complete even to workshops in each country; and by adherence to a 3:2:2 division of activity including personnel, the possibility that on occasion the best man, or men, or the best location will not be chosen for a job.

After the staggering financial losses reported for 1947 and 1948 by the three airlines, private capital became less willing to invest in Scandinavian commercial air transport. The indebtedness of the Norwegian company was largely held by the government. In Sweden and Denmark, loans for commercial aviation from private sources became more difficult to obtain in that international commercial air transport did not appear to have a profitable future. Nevertheless, there was a desire among business interests in Scandinavia for extensive airline operation. The Scandinavian countries have a high per capita export

[39] To the layman, the irrational requirements of currency exchange control are shown here in the stated necessity of having an establishment in Norway of sufficient cost to use up accumulations of income in Norwegian currency. Norway has one of the softer currencies in Western Europe.

figure, much of which is in industrial goods, such as machinery and electrical equipment. This type of export good needs close contact between the buyer and seller for instruction and servicing. Therefore, Scandinavian businessmen were most anxious to have quick connections with markets throughout the world. Furthermore, a large first-class airline itself functions as an effective advertising medium.

Businessmen did not indicate a willingness to subsidize commercial air transport further, probably because an equation of cost and benefit would be difficult to achieve for individual investors. On the presumption of general public interest in an airline businessmen have turned to the governments for aid. The three governments, until November 1950 all Socialist,[40] had not been inclined either to subsidize or invest to any great degree. Swedish government officials stated on a number of occasions that there would be little or no public financial support for international air operations.[41] And as discussed earlier, the Norwegian government in 1949 became quite alarmed about the amount of public money being expended for commercial air transportation.

However, the cooperative aspect of SAS has made commercial aviation more appealing as an area of public investment. Scandinavian cooperation is a political objective in itself, capable of obtaining public support. Each of the national legislative bodies in approving the SAS consortium agreement appropriated funds to guarantee SAS against losses up to $1 million per year for five years.

How far the governments will go in the use of public funds in the interest of Scandinavian air cooperation cannot be estimated. The terms of the consortium make it quite onerous for one party to default for financial or other reasons. By majority vote, two of the parties can oblige the third to make further contributions.[42] Such an obligation can be evaded only by withdrawal from the consortium, which in itself might be costly and undesirable. Thus the governments may be committed through cooperation to expenditures which they individually would not make.

Cooperation has earned for Scandinavian commercial aviation financial backing from the three governments which probably could not have been obtained otherwise. From that point view, cooperation has been an objective and advantage for the commercial interests represented in the national companies.

### *International-legal Factors*

The third set of factors which induced the formation of SAS reflects the nature of the international conventions and practices which are applied to international civil aviation.

The scope of operation of an international airline depends on the

[40] In November 1950 the Socialist government in Denmark was replaced by a coalition government.
[41] *Op. cit.* Kungl. Maj:ts proposition No. 260, p. 8.
[42] *Op. cit.* Consortium Agreement, pp. 15.

terms of the air agreements which the airline's government is able to make with the governments of other nations. In general, these agreements may be distinguished on the basis of the liberality of their terms. One type of agreement is that which grants the five freedoms of the air. Others are more restrictive, limiting scheduled activity to the first four freedoms and sometimes containing even more restrictive clauses, such as the setting of traffic quotas.

Denmark, Norway, and Sweden have individually not a great deal to offer in the bargaining process for air rights. The population of the three together is about 14 million. Furthermore, located in the "quiet corner of Europe" the three countries are not strategically situated in the flow of air traffic. Sweden is quite at the end of the line. Only a relatively small amount of air traffic continues east to Finland and on behind the Iron Curtain. Denmark has a relatively good position, and its airport Kastrup at Copenhagen is one of the busiest in Europe. Traffic in and out of Scandinavia largely passes through Kastrup. Norway, like Sweden, is off the beaten path with no traffic passing through except flights going directly from Sweden across the North Atlantic (and possibly polar flights).

With the United States and the nations of northern Europe, Denmark, Norway, and Sweden have had little difficulty in obtaining adequate air rights. The situation with regard to those nations whose airlines do not desire to fly into Scandinavia is less satisfactory. In Italy, Spain, and even France some restrictions have been encountered. Outside of Europe, where O-SAS has operated, the three governments have worked together since 1946 to obtain air rights. However, in spite of this advantage, there have been obstructions presented because of the desire of the hitherto backward economies to protect their infant airlines.

Air cooperation overcomes two disadvantages which face the Scandinavian countries. First, it makes of the three countries a bargaining block in their negotiations with other nations. Secondly, it transmutes the conflict of interest between the three concerning air freedom into a joint effort vis a vis the rest of the world.

The separate advantages of the three countries when bound together give Denmark, Norway, and Sweden a stronger position in negotiation for air rights. Denial of entry into all three countries is a much more serious threat than denial into one or two of the three. Before cooperation, the three could be played off against each other by an outside power. Now the three Foreign Departments work together in negotiations with other nations. Or if it appears more advantageous one of the three bargains separately. In any case, the Scandinavian representatives attempt to obtain inclusion in air agreements the so-called "SAS clause." The "SAS clause" permits planes licensed in one Scandinavian country to fly commercially into a country which has an agreement with a second Scandinavian country. Thus a Norwegian plane may fly into Spain which has an air agreement with Sweden alone

of the Scandinavian countries. If the SAS clause cannot be obtained then schedules are planned so that planes licensed in the Scandinavian country which is party to the agreement are flown into the territory of the other party to the agreement.

Sweden has sufficient economic resources, but not a geographic position, to dominate Scandinavian aviation. If the geographic positions of Sweden and Denmark were exchanged, other things remaining equal, there would likely be no Scandinavian air cooperation, for Sweden would then have no need for Denmark's aviation resources. However, as things are, Sweden's air traffic moves down into and across Denmark on its way to most destinations in the world. Copenhagen is the natural air center of Scandinavia. From it traffic splits off in all directions north and south. It is nearly essential to a Swedish air carrier that it be permitted to land for commercial purposes in Denmark and further that it have fifth freedom rights there as well. However, Denmark has not been willing to give up its locational advantage without receiving something substantial in return. Since World War II, Denmark has abstained from signing the multilateral Air Transit and Air Transport Agreements.[43] Also Denmark has refused, except on the basis of SAS, to sign air agreements with Sweden and Norway which would grant reciprocally fifth freedom rights. Danish aviation people believe that if fifth freedom rights were granted Sweden aside from a cooperation agreement, Denmark would be overwhelmed by a financially stronger Swedish airlines.

Thus Sweden, in order to achieve a more economically sound commercial air operation, has been obliged to cooperate in greater or lesser degree with Denmark. Cooperation is mutually beneficial in that Sweden has greater aviation resources in equipment, personnel and traffic potential, while Denmark has a superior location. Copenhagen which has long been a major seaport in Northern Europe is greatly interested in continuing that position in air transport. An air center brings to an economy very definite commercial benefits in terms of foreign currency income, tourist expenditures, and generally stimulates commercial activity. Cooperation with Sweden and Norway assures Denmark of a regular flow of traffic and the opportunity to share in the proceeds of that traffic. More explicitly, Danish Airlines is able to share in revenue accruing to Norwegian and Swedish Airlines in return for which it shares with the other two Copenhagen's strategic position in air traffic.

Norway's aviation resources are weakest of the three, and as a result, perhaps Norway will benefit least from the cooperation. Probably the desire to preserve the Scandinavian nature of the cooperation, and also the potential threat of Norwegian collaboration with an American company on the North Atlantic, brought certain palatable concessions

[43] The first gives to signatory powers the privilege of scheduled commercial transit and noncommercial landing rights in the territory of co-signing powers. (First two freedoms.) The second grants full commercial rights between the signatory powers (five freedoms).

to Norway during the negotiations, and in the SAS agreement. Undoubtedly, also, the protestations of the Norwegian press during the negotiations period strengthened the hand of the Norwegian representatives.

Under the existing legal practices and procedures of international commercial aviation, the Scandinavian countries have been strongly motivated to cooperate closely. The whole is greater than the sum of the parts. Instead of using the accepted restrictive policies of international aviation as competitive weapons against each other, they have combined to mutual advantage. Because of their relatively small traffic potential and weaker bargaining position individually, it has been worthwhile to join together to meet the larger powers on a more even footing. It is perhaps to the everlasting credit of the Scandinavian countries that they have had the vision to recognize their common lot and to overcome the nationalistic inclinations which so often sabotage a proposal of this nature.

# RECENT ADDRESSES

## "THE CASE FOR THE LOCAL SERVICE AIRLINES"*

By Leslie O. Barnes
President, Allegheny Airlines, Inc.

WITH your indulgence I want to explore a highly controversial concept known as the "Local Service Airlines." In this exploration I am going to pose some equally controversial questions — questions which should not be avoided by the aviation industry, our Congress or the Civil Aeronautics Board.

Allegheny Airlines is a Local Service Carrier. We are one of fifteen other Local Service Carriers in the United States. These fifteen Local Service Airlines will receive mail payments during 1954 in the neighborhood of $23,000,000 to bring scheduled daily air service to more than 200 cities in the United States which otherwise would not receive air transportation. The broad question to consider is this: *Does the service rendered to the nation and the communities served by these fifteen local service airlines in the carriage of mail, goods and persons justify this investment?*

I will attempt to show that it is, without question justified; and, furthermore, I will attempt to show that it is a temporary and farsighted investment by our government in the community and business future of our nation. In exploring this question with you today, I must pose three additional, but nonetheless related and pertinent questions:

— What is happening to the transportation requirements of our nation, and are we keeping pace with these requirements?

— How dependent are major trade and manufacturing areas, such as Cleveland upon rapid, frequent and reliable communications with the so-called intermediate cities and areas of 100,000 and less?

— When we speak of air mail subsidy, what is meant? And, precisely who is being subsidized?

I respectfully pose these questions not as a challenge and not alone to you today — I pose them also for the astute and cautious consideration of our Congress, which in the final analysis must weigh the evidence and judge the virtue of the Local Service Airline Concept. I pose these questions to the Civil Aeronautics Board, which conceived the local carrier concept and whose judgment stands or falls on the record produced by the local carriers. And, I pose these questions to the people of the communities being served by the Local Service Airlines, because it is in these communities that the need and requirements are generated, and it is there that the final judgment perhaps must rest.

The questions may be answered here today, and I will attempt to do this; but acceptance of these answers, and the continuation of the service we render lies within the judgment of those we serve. I believe the prevail-

* Delivered at the Allegheny Airlines' Inauguration Luncheon on extending service to Cleveland, Ohio, June 8, 1953.

ing circumstances of today, and the record of achievement so far will justify this concept. I would rest our case on this record.

### Changing National Transportation Requirements

The first question asked how our national transportation requirements were changing, and if these changes were being met. Our national transportation system *is* changing, and in some respects is deteriorating very rapidly. Today's successful business man not only travels more, but he travels by air — where he can. He travels more because he must to keep pace with the increasing tempo and demands of our competitive system. Moreover, he travels by air — not necessarily because he wants to, but rather because he has to, if he is going to keep pace with his competitors and with the demands of his time. Many times, he must go by air, if he goes at all, because there is no other way to go unless he drives. Obviously, he can cover more branches of his business, more cities, more markets, if he travels by air.

Many cities today either have no rail passenger service at all, or it is extremely limited and ineffective. Many communities are isolated from their primary community of interest or trade area except by surface roads — often congested and inadequate. Rail passenger service at intermediate cities has been steadily declining during the last two decades because rail passenger service has proved incapable of competing with the automobile, the bus and in some instances the airplane. The only reason many cities today have even token rail service is because the Interstate Commerce Commission has refused the railroads permission to suspend. In spite of this block, I nevertheless forsee the day when large intermediate cities and all smaller communities will be completely deprived of any rail passenger service. All one needs to do to substantiate this is to try travelling between Huntington and Parkersburg, West Virginia to Pittsburgh; or from Bradford, Pennsylvania to Cleveland or Harrisburg; or Wilkes Barre/Scranton to Cleveland. These are only the fewest few — a long list of "for examples" can be cited.

Our nation's roads are an increasing problem. Our system of roads are not keeping pace with travel demands, and I do not believe they can keep pace. As time goes on, their use as a medium of travel between communities will steadily diminish — and they will become more and more hazardous. In the face of a diminishing rail passenger service to our intermediate cities and communities, and in consideration of the increasing congestion and inadequacy of our highway system, it must be apparent that the only alternative for fast, frequent and efficient transportation is the scheduled air carriers.

It has been suggested[1] — and only recently — that the Trunk Line Carriers should be required to provide service to intermediate cities, thus avoiding the so-called subsidy mail payments to the Local Service Carriers. I respectfully suggest that this makes absolutely no sense for a number of unassailable reasons.

First of all, there would be no saving in mail pay should it be decreed that the Trunk Lines should replace the service now rendered by the Local Service Carriers. When I say replace, I mean to replace that service, *schedule by schedule*, community by community. If this were done, then I submit there would be *no* unsubsidized air carrier following such an action. Furthermore, I submit also that the additional mail requirements would exceed the amounts paid the Local Service Carriers. The greatly increased cost could be

[1] See letter of Senator Edwin C. Johnson to the Chairman of the Civil Aeronautics Board, *infra*.

avoided only if the trunk carriers again rendered only a token service to these Local Service Communities. If this were done, then the needs of these communities would not be met, and certainly the records, as I will show you later, will substantiate that need.

The bare facts are that, if Local Service Airlines are replaced by Trunk Line Services, then only a token service will be rendered. I know of no way to force or dictate a frequency of service to a community. The Interstate Commerce Commission could not do it in the case of the railroads, unless considerable sums of money were to be added to already considerable sums of money paid the railroads. The Civil Aeronautics Board has never tried to, nor can it force the Trunk Lines to render a specific amount of service to a given community.

Statistics are almost always boring, and I have tried to stay away from them today. I would, however, like to cite a few examples to demonstrate, not only the point of token service, but additionally the question of need. Johnstown, Pennsylvania received Trunk Line Service for a number of years at the rate of one round trip each day. Allegheny replaced this Trunk Line in 1950. Today we operate eleven daily round trips through Johnstown. This year we expect to service approximately 13,000 passengers, 30,000 pounds of mail, and 50,000 pounds of express at Johnstown. We have outgrown the DC-3 here as we have in many other places.

The Wilkes Barre/Scranton area is served by a Trunk Carrier in addition to Allegheny Airlines. In 1937 this Trunk Carrier operated one round trip daily through this area — it still operates one round trip a day through there. We operate ten round trips each day, and demands are such that we should add more. This year we will serve more than 17,000 passengers, and will handle more than 80,000 pounds of mail and 150,000 pounds of express.

Bradford and Williamsport, Pennsylvania are similar examples of locations which have been served for years by Trunk Carriers, yet receive less service than that provided by the Local Service Carriers. There are many more in the nation. These communities can no more afford to return to this volume of service than the Trunk Carriers can afford to render that service.

There is a vast difference between a trunk line operation and a local service operation. Different techniques are employed, different equipment is required — both in the air and on the ground. The two types of operation do not mix in an operational sense, and the concept is growing that an airline must specialize in either one or the other.

It was this premise of an air transportation system comprised of two clearly distinct segments which prompted the certification of the Local Service Airlines; it is developing with increasing rapidity; it is providing communities and population areas with scheduled air transportation which in the light of a declining rail passenger service and increasing highway congestion fulfills an essential, even critical need.

So in answer to the first question, I submit that our nation's requirements are changing, that the need for air transportation of a frequency and character adapted to community requirements does exist, that the Local Service Airline Concept has permitted our nation to keep pace with these changing requirements, and finally, that any thought or plan to replace or reduce the service provided by the Local Carriers is a backward step. Any promise to do so would represent the cruelest kind of faithlessness, because it will not be done.

## Communication With Intermediate Size Cities

The second question sought to determine the degree to which large trade areas such as Cleveland was dependent upon rapid, frequent and reliable communications with intermediate areas of 100,000 persons and less.

The answer must certainly be obvious. Cleveland, to hold its most favorable position as a great trading center must have ready means of communication with intermediate cities within a radius of 250 to 300 miles. How long could Cleveland or any other metropolitan trading area survive if it could not communicate with these smaller cities and communities?

Your businessmen can answer that question, as can the businessmen in other cities — both large and small. According to your Chamber of Commerce, there are 32,895 business concerns within the city limits. All of these in one way or another are dependent either directly or indirectly upon the transportation facilities available to Cleveland. Certainly, representatives of more than 50% of these business establishments must depend upon the various media of transportation in Cleveland; all of them must receive business representatives from other cities. A community's strength is directly related to its accessibility to other communities. Consider the consequences to your business houses if Cleveland were to lose all its air transportation. The consequences must be obvious.

To a lesser extent, yet in exact ratio the same consequences accrue to a smaller community. Many businesses in the intermediate size cities we serve, located there because these cities had air service. This same situation prevails in many other cities served by the Local Service Carriers. Air transportation has brought businesses to areas critically in need of new enterprises to employ its workers. The Local Service Airlines have brought air transportation to these areas. It is this concept which has substantially contributed to the generation of new business, new prosperity to the community. As a by-product, it has produced the highly desirable and vital objectives of decentralizing our large industrial areas and spreading them to outlying but accessible areas. This trend cannot be arrested. Its continuance is dependent upon a continuation of adequate and sustained air transportation service. Again, I submit that the Local Service Carriers are an inescapable part of this development; that they cannot be replaced by other types of transportation — either air or surface — without real harm being done to the communities now benefiting from the farsighted concept of Local Service Airlines.

So, in answer to my second question, I suggest that the problem of the intermediate cities is your problem as well, because your trade, and your business and your industry is linked to their requirements and their productions.

## Defining "Subsidy"

The third question sought a definition to the term "Air Mail Subsidy," and further to determine precisely who was being subsidized. Air Mail Subsidy has been defined in a variety of ways. Surface carriers defined all air mail payments as subsidy; the airlines, on the other hand, for years refused to recognize that the term even existed and used it only in the most intimate circles. However, in 1951 the Civil Aeronautics Board divided air mail payments into two categories. Henceforth, the unsubsidized portion of the mail payments was classified as "Service Payments" and the remainder as "subsidy." This has come to be generally accepted, especially by those carriers which by the grace of the Board's decision could show they received no subsidy. Some even insist that they never received any subsidy.

I am going to propose a different definition. On the premise that a determination of subsidy is dependent upon a reasoning process whereby it is *first* determined what air service is necessary, and *secondly* it is determined what that service *should* cost, then shouldn't subsidy logically be

defined as the difference between what it should cost and what it actually does cost?

Let me elaborate just a bit on my suggested definition. The first determination in my premise was to decide that the need actually did exist. For example, I doubt anyone will question that there is a proven need for air transportation by at least 90% of the cities served by the Local Service Airlines. I think the records to date will prove that need.

Assuming that need is proven, as it had to be to get air service in the first place, and assuming also that need has been demonstrated — which it has — then, the next logical step is to determine how *much* service is required in terms of daily schedules, daily mileages and other accepted measurements. "How much" is a product of first—estimation, second—experience, and third—circumstances. We have completed this step to the extent that we can rely on the records of the past five years, and upon reliable projections into the future.

Having completed this step, the next question then, is how much should this service cost? We know with a reasonable degree of accuracy how much it costs for the Local Service Airlines to render this service. There is the very real question, however, as to whether this same service can be provided more cheaply — without lowering the quality or frequency of the required service. If it can be fairly determined that equal service can be provided at a lower operating cost, then the difference between what that cost is determined to be, and what it actually costs to provide it, is the subsidy element.

It would, therefore, follow that a continuation of the Local Service Airlines would be justified only by the future promise of development to the extent that subsidy within this definition would eventually be eliminated and the full potential realized of community growth and use of the service.

Pause for just a moment, and consider the extent to which the potential has been developed because this will determine the future. In 1949, the Local Service Carriers transported 680,528 passengers. In 1952 we carried 1,703,730 passengers. This year we will carry well over 2,000,000 passengers. The business houses, and industries in our cities generated 310,605 ton miles of express and 436,000 ton miles of Air Freight in 1949; in 1952 we generated 866,526 ton miles of Air Express and 1,081,319 ton miles of Air Freight. 1953 will produce an increase over 1952 of nearly 50%. Air Mail, the backbone of the subsidy question increased from 412,094 ton miles in 1949 to 890,000 ton miles in 1952. It will go over 1,000,000 ton miles this year. The Local Service Airlines generated approximately 5,000,000 dollars in non-mail revenues in 1949; in 1952 non-mail revenues of more than 20,000,000 dollars were generated. 1953 will exceed 1952 by approximately 30 to 50%.

Certainly these figures are not insignificant — not by any possible definition. They represent progress toward the objective of low-cost, short-haul, mass air transportation; they represent a demonstrated *need* on the part of our nation's intermediate cities and population areas for air service; and they represent the wisdom of the Local Service Concept.

### *Problems of Progress*

Progress over the next decade is inevitable, unless the policies of the past seven years are reversed. Progress will continue, year by year, in spite of the fact that there is not today a suitable replacement for the aircraft we all use — the time-honored and proven Douglas DC-3. This reliable work-horse of the airlines is our vehicle for providing this service.

But, we have outgrown it at many cities and on many routes. A replacement must be found.

The need here is for a rotary-wing type of aircraft of the Helicopter or Converti-plane type. I believe that within the next eight to twelve years we will be using a 35 to 40 passenger version of this principle in our daily operations.

With the introduction of new equipment, the full potential of the Local Service concept will be realized; with it will come the mass movement by air of large volumes of persons, goods and mails over short distances. There may be an intermediate step, and there will probably be one because larger more productive equipment is required today. That need will be felt more keenly by the end of this year, and within the next three years. It must be clear, therefore, that we cannot wait for ten years.

The point I make here is that the DC-3 is the only aircraft today which can serve all the cities receiving service from the Local Service Airlines. I relate this point again to both the question of *cost* to provide the service, and to the question of any replacement of Local Service at the communities we serve.

If it is true that the DC-3 is the only aircraft, then to substitute something else for the Local Service Concept would dictate that whatever agency provided the substituted service must by necessity procure or re-equip its fleet with the DC-3's. Where, then, can there be any saving to the Federal Government except through further development and generation of non-mail revenues? There are only two possible courses of action — One, is the continuation of the Local Service Concept; the other, is the suspension of service at communities now receiving that service.

This is a harsh conclusion; but, when all the window dressing and flim-flam is stripped from the issue, this is what remains. Judgment in this matter of air service to intermediate sized cities must necessarily rest on the issues of costs and requirements. It costs more to deliver a letter to a rural community than it does to deliver one here in Cleveland. By the same token, it costs more to deliver a letter by air to a city of 25,000 persons than it does to Cleveland. Under present definitions can it be said that a Local Service Carrier is subsidized any more than it is said that the RFD carrier is subsidized? Can it be logically stated that the farms and rural homes are subsidized any more than it can be said that the communities receiving Local Service are subsidized? I think not.

How much is it really costing the Government to provide air service to local communities and regions in the United States? In the Fiscal Year 1951, total payments by the Federal Government for the domestic air mail service amounted to $109,434,000. This includes (1) Service mail pay of $27,369,000; (2) Subsidy of $34,565,000, and (3) Post Office Department handling and delivery service costs of $47,500,000.

Now the total revenue received by the Federal Government during the Fiscal Year 1951 from sales of domestic air mail postage amounted to $93,000,000. Therefore, in the Fiscal Year 1951 the net cost to the Government, including Service mail pay, was only $16,434,000. This amount covers 33 scheduled air carriers, 15 of which are Local Service Airlines.

During 1950, the first full year of Allegheny Airlines scheduled passenger, mail and property services in the Middle Atlantic Area, the communities on our routes developed 694,930 pounds of air mail. In 1951 these cities developed 933,193 pounds of air mail. While records are not complete for 1952, the Post Office reports a steadily increasing air mail usage. The fact that these revenues are derived from users rather than general tax funds certainly distinguishes these monies from outright subsidy. And this is not all — another revenue accruing to the Government from the

operation of scheduled air services is the 15% transportation excise tax. While many airlines feel that the removal of this tax would lead to greater use of passenger air services and a resultant decrease in the requirement for Government support, this tax, nevertheless, totaled over $85,000,000 in the Calendar Year 1951.

In addition to this, the scheduled airlines paid the Federal Government more than $8,000,000 in gasoline and oil taxes during 1951. Thus, the Government received non-mail revenue in 1951 of an additional $93,000,000. Where then is the deficit?

The route systems of the fifteen Local Service Airlines provide direct air service to approximately 340 communities with a combined population of nearly 50,000,000 persons. These Local Service Airlines serve the smaller communities of our nation, and more than 50% of the communities served do not receive air service from any trunk airlines.

I come then to the basic question of whether the expenditure of Government funds is justified in the Local Service Airline program. Certainly the record must substantiate the judgment of the Civil Aeronautics Board in establishing this program, and it must substantiate the judgment of our Congress in providing the funds necessary to develop it. The record of the past, the record of the need, and the record of the service rendered the communities served by the Local Service Airlines does not substantiate any thought or any proposal that this service be abandoned or reduced. The Local Service Airlines are the agent in the concept; judgment must rest with the people receiving this service, with our Congress and with the Civil Aeronautics Board, as to whether it should be expended.

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# UTILIZING TRUNK-LINE PROFITS TO SUPPORT LOCAL AIR SERVICE

April 9, 1953

Honorable Oswald Ryan, Chairman
Civil Aeronautics Board

My dear Mr. Chairman:

DOCKET No. 5509, "*A general investigation of all passenger fares between points within the continental limits of the United States of various Certificated Air Carriers*," concerns and worries me greatly. May I bring to your attention, therefore, and to the Board, my views for urging very serious consideration of certain vital phases of this proceeding?

It is my understanding that this investigation was initiated early in 1952 to determine primarily whether the dollar-per-ticket increase then authorized by the Board should be permitted to remain in effect. During the year, I understand the issues were broadened to include a comprehensive inquiry into both the level and the construction of all airline passenger fares. This, I suggest is an enormous and far-reaching undertaking and challenge to all forms of transportation of persons.

If the Board should order a passenger rate reduction for the larger airlines which it might be contended are making too much money, it would result undoubtedly in necessary rate reductions on the part of all carriers in the United States. The struggling carriers would have to reduce their

passenger fares in order to meet the competition of the opulent carriers. This would result in reducing the profits of the smaller trunk lines below a reasonable level and thus impose the necessity of increasing their subsidy. Fares by their very nature must be applied across the board. A hit-and-miss application of passenger rates is not realistic.

I do not know whether any of the airlines are presently making profits which, under all the circumstances, could be considered exorbitant. But even if they are, a passenger rate reduction would not be in order at this time. While the Board's report indicates that most trunk airlines are no longer receiving direct airmail subsidies, your most recent subsidy figures show that you expect to authorize $26,179,000 of subsidy for the domestic airline industry in the fiscal year 1954. All of the local-service airlines and several of the smaller trunk lines will be receiving subsidy in varying amounts. That figure must not be increased and the Board's strongest efforts should be made to reduce it. I expect the Administration and the Congress to insist upon an immediate substantial subsidy reduction.

As I see it, the Board should be using its best efforts to reduce subsidy payments, particularly for the domestic industry, and it seems to me that the very fortunate current profits of the larger airlines suggest a method for doing this. Instead of looking toward a reduction in the rates of these large carriers, it would be far more sensible for the Board to compel such carriers to utilize these profits by assuming the operation obligations of the local-service lines and smaller trunk lines that now require a subsidy.

The big railroads are compelled by the regulatory bodies to operate branch line passenger service at a terrific loss. Instead of reducing the rates of the strong air carriers, the strong air carriers should be required to take the bitter with the sweet, as have the railroads and thereby relieve the Treasury of domestic airline subsidy. This point I consider to be vital, and one which the Board should give the serious attention it deserves.

Airline rate reduction would have a disastrous effect upon railroad rate structures, too. The railroads are already losing hundreds of millions of dollars a year on their passenger service, part of which they attribute to airline competition. An airline rate reduction will accentuate this problem, and the railroads will be in a position — very properly — to complain that their competitive position has been damaged, not in the normal operation of free enterprise, but by government paying a subsidy to a large group of air carriers.

The railroads argue with justice and force that the airlines should be paying increased user charges for the federal airways, and that the railroad competitive position is damaged by the failure of the airlines to do so. While I have not yet actively urged that the airlines be required to pay additional user charges, it must be recognized by anyone who has knowledge of the trends and the temper of the times, that the hour is not far off when such payments will have to be made. The Appropriations Committee of both Houses of Congress have been urging this step for years. This approaching challenge to airline operation should be given consideration by the Board in this proceeding, since it would be folly to reduce the air carriers' rate levels at a time when they should be anticipating increased expenses for the use of airports and airways.

The airlines have earned and should be commended for keeping their passenger fare level constant during these recent years of rising labor and material costs — costs which have forced the railroads and other forms of transportation to raise their fares substantially. Truly, the economies achieved by airline management in the last four years have been amazing.

Too, I approve wholeheartedly scheduled aircoach service and its wide-

spread adoption. It should be further extended, consistent with the cost of providing the service. Air transportation should not be a luxury reserved for the movie actor or folks travelling on an expense account. It should be made available to all our people, but not at the price of increasing the subsidy to a large group of carriers, or impairing airline service to the smaller cities now being served.

Yours is a difficult job and I want to help you and not add to your woes. As I see it, the problem is to so regulate the certificated airlines that they make enough money to keep equipment in top condition through vigilant and rigorous maintenance, and through constant purchases of improved aircraft. Also, to maintain the airline enterprise, trunk, regional and service, in a sound economic status so as to continue the maximum development of air transportation through the ups and downs of business cycles. But at the same time, the airlines must be prevented from charging the public exorbitant fares which realize unwarranted profits.

Before it is too late, I urge you and your colleagues on the Board to give heed to these pressing considerations which in the public interest I feel compelled to call to your most serious attention.

Sincerely,

EDWIN C. JOHNSON
U. S. SENATOR

# INTERNATIONAL REVIEW

## INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

### TECHNICAL CONFERENCE

IATA's Sixth Annual Technical Conference, presided over by J. A. Collings, Executive Vice-President of Trans World Airlines, took place at Puerto Rico from April 20th to May 2nd. It was attended by 150 persons representing 65 airline and manufacturing companies and government agencies from a score of countries.

*Helicopter Symposium*

A notable part of the session was devoted to a Helicopter Symposium, held April 24th through 26th, at which there was a full and frank exchange of information between IATA airlines, metropolitan helicopter operators, manufacturers, government authorities and other interested groups, including representatives of the International Civil Aviation Organization (ICAO). Mr. J. T. Dyment, Director of Engineering for Trans-Canada Air Lines, was Chairman of the Symposium.

A particularly valuable contribution was made by those companies and agencies which have already begun helicopter operations — Los Angeles Airways, Helicopter Air Services (Chicago), Okanagan Airways, New York Airways, Port of New York Authority, British European Airways and SABENA Belgian Airlines — and by representatives of the Helicopter Committee of the Air Transport Association of America.

The full and official record of the Symposium will be published by IATA later this year. Meanwhile, the following statement of requirements for the further development of the helicopter for commercial transport service was adopted by the participants:

"The consensus of opinion of the Helicopter Symposium of the Sixth IATA Technical Conference is that transport helicopters will be brought into effective commercial operation as rapidly as the development of equipment and technique will permit.

"It appears that suitable transport helicopters may become available in quantity before adequate facilities, techniques and regulations for their operation have been fully developed.

"These developments are dependent upon the broadening and acceleration of the present efforts of government agencies, operators and manufacturers.

"In view of the importance of the transport helicopter to the transportation systems of the future, and of the mutual dependence of civil and military developments, it is hoped that military departments and appropriate civil regulatory agencies will foster, together with civil operators and manufacturers, a program of prototype testing of helicopters in commercial operating regimes. The objectives of this program should be the improvement of reliability, the development of operating procedures and techniques, and the accumulation of handling experience.

"Since commercial transport helicopter operations will need to be carefully blended into the nature of the cities they will serve, civic agencies should be encouraged to participate in the development program outlined above, with the object of providing adequate heliports and facilities; and protecting suitable approach paths in built-up areas, by keeping to a minimum the number and height of towers and other aerial obstructions and by marking adequately those obstructions which must be permitted.

"Since certain of the problems associated with operations over city-centers have a fundamental bearing on the design of future transport heli-

copters and heliports, regulatory agencies should be encouraged to accelerate the determination by flight research of flight safety criteria and optimum approach, landing and take-off procedures for all-weather operations of transport helicopters. This program should include the development of instruments adequate for manual hovering in blind flight.

"In view of the necessity for operating helicopters under adverse weather conditions in close proximity to obstacles in order to serve city centers and otherwise to exploit their advantages, appropriate government agencies should be urged to accelerate the development of better weather forecasting, navigational facilities and procedures to meet the problems peculiar to the helicopter, and to institute smoke prevention laws in built-up areas.

"In view of the lack of extensive transport helicopter operating experience, all regulatory and local governing agencies should be cautioned against restrictive requirements, primarily applicable to fixed-wing aircraft, which might deter the full exploitation of the unique characteristics of this new vehicle.

"In order to reduce the cost and increase the availability of transport helicopters, both for military and commercial operators, government agencies, operators and manufacturers should attempt to assimilate as far as possible the design criteria and specifications of civil and military helicopters.

"Since the usefulness of the helicopter depends upon its convenience and freedom from delays associated with surface and fixed-wing operation, and since these delays have been most serious in international operations, governments should be urged to take the necessary steps to relax requirements for unnecessarily involved ticketing and other transport documents and to make proper arrangements for adequate and expeditious handling of customs and immigration facilities at heliports."

The Helicopter Symposium was unique, not only in the remarkable degree of collaboration between government officials, operators and manufacturers evinced, but from the point of view of air transport regulation. International regulation of fixed-wing aircraft was preceded by and has been based upon national regulation. Witness ICAO, which is an international concordance based upon pre-existing national codes. With helicopters, however, the international regime is being approached more directly: the indicated international standards and procedures are being devised well before corresponding national standards and procedures have been established.

### *Terminal Area Problems*

A second major problem dealt with by the Technical Conference was that of obtaining the full use of airport traffic handling capacity. The conclusion drawn by the Technical Committee after considerable discussion was that the maximum use of airports can be gained only by proper correlation of airport runways, air navigation and landing aids, airway facilities and traffic control arrangements in the terminal areas.

The discussions also evolved the following four-point formula which may assist airport traffic planners in their attempts to provide for the greatest possible capacity:

"1. The total capacity of an airport to handle traffic under instrument flying conditions must be related, not only to the air navigation system which serves it, but equally to the capacity of the airways which feed into it, its relationship to other airports in the same terminal area, and to such ground facilities as runways, taxiways, run-up and by-pass areas and the like.

2. It is likely that most airports will reach their maximum capacity to handle traffic when they have two-nonintersecting runways, one for landings and the other for take-offs. However, if these two are to accommodate their maximum potential, they must be planned with

adequate high speed exits, suitable taxiways, run-up and by-pass areas and the like; there must be adequate separation between them; and the terminal area itself must be planned to provide separate in-bound and out-bound traffic lanes and the flexible traffic patterns needed to feed the instrument landing system at its maximum capacity. Failure to consider all of these elements may either severely restrict the capacity of the airport, or prove costly when changes must be made.

3. The establishment of another airport in a given terminal area may actually reduce the handling capacity of the area rather than expand it, unless its runways and approach patterns are properly oriented with respect to existing airports and routes.

4. To achieve maximum capacity for an airport, air traffic control, airline operations and navigational aid specialists, as well as airport design engineers should participate in its planning. It is desirable that planning should anticipate an ultimate need, even though actual facilities may be installed to meet the immediate demand only as it develops."

*Performance Requirements*

Another achievement of the Conference was an extensive examination of operational factors effecting aircraft performance. Based on an exchange of views between airlines' specialists, governments, manufacturers and research establishments, IATA will recommend to its 67 airline members that they make a thorough evaluation of the impact on their operations of the proposed new "rational" performance requirements code being drafted by the Standing Committee on Performance (SCP) of the International Civil Aviation Organization. It is expected that this code will be put to an ICAO meeting of Divisional status in March 1954 and subsequently to the ICAO Council for approval.

In urging such an evaluation, the Technical Committee, which sets technical policy for IATA, stressed the desirability of arriving at a new performance requirements code which will add to the efficiency of air transportation without detracting from its present level of safety, but which would not sacrifice that efficiency for the sake of theoretical and uneconomic restrictions on performance.

The Committee felt that it was particularly important that performance requirements be as simple as possible in their framing and application; that they be flexible enough to permit local treatment of peculiar local problems; and that they allow operators a certain amount of latitude within the statistical variables expressed in the requirements. While it was recognized that requirements would have to be drafted with the very large bulk of operations in mind, there is still a small, but nevertheless important, range of operations where local conditions might make the general rule unnecessarily restrictive, and that it is therefore important to allow the operator to work out with local authorities procedures which will be suited to local circumstances and which will provide an equivalent level of safety.

The Committee also stressed the danger of premature applicability of the new performance standards to turbine-powered aircraft, whose operation has not yet been extensive enough to provide a sufficient statistical background.

The imperative need to develop sufficient meteorological statistics for all international airports was urged by the Committee as a prerequisite to the incorporation of temperature, humidity and wind accountability in performance codes. It was pointed out that, while ICAO requirements call for the gathering of weather data, a greater degree of compliance by national governments with the reporting specifications is urgently necessary for present operational purposes, as well as for those of SCP. More data on runway wind statistics and wind variability, as well as more exact standardized wind speed forecasts were also felt to be necessary.

### Single Agency Agreement Scheme

Of particular interest from a legal point of view is IATA's unheralded, but strikingly successful application of the Single Agency Contract Scheme between IATA and its approved passenger and cargo sales agents. Authorized by the Buenos Aires Traffic Conferences in May 1952, and put into motion at the beginning of this year, the Scheme has now been in operation for more than six months.

Previously, each IATA member has had to execute and maintain a separate lengthy contract with each of the many agents who sold transportation for it. The new Scheme is for IATA to make and maintain a contract with each agent on behalf of all those members wishing to retain him. Thus, IATA executes and sends out the standard form of agreement to each IATA approved agent. The latter signs and returns it to IATA. The Conference Secretary then notifies members which approved agents have executed and returned the agreements. Thereupon each member that wishes to appoint an IATA approved agent as its own agent does so by sending a simple Certificate of Appointment to the agent with copy to the Conference Secretary. Thus on the basis of a single agreement executed by IATA and the agent, the latter enters into contractual relationship with as many IATA members as may wish to appoint him.

In accordance with the authority given by the Traffic Conferences at Buenos Aires, the Conference Secretaries signed and circulated last Fall more than 7,000 agreements to agents on the IATA approved list. Despite legal uncertainties in several countries, with few exceptions agreements have been signed and returned to IATA by the agents.

It is expected that the new Scheme will effect substantial savings of time, trouble and expense to IATA members, as well as to thousands of agents. For example, when it was necessary recently to effect a minor amendment to the IATA standard form of agreement, this was accomplished by the three Conference Secretaries sending out approximately 7,000 notices and receiving approximately the same number of replies from agents. Under the previous system each IATA member would have been obliged to communicate with each of its appointed agents for an industry total of well over 100,000 separate communications.

A similar scheme has been put into force by members of the Air Traffic Conference of America with its agents. But it is believed that IATA's use of the single contract principle is quite unique in respect to its scope of application, number of parties and the multitude of legal jurisdictions concerned.

### Ninth Annual General Meeting

The Ninth Annual General Meeting of IATA will be held October 5th-9th at Montreal. Trans-Canada Airlines and Canadian Pacific Airlines will act as Host Airlines. At the commencement of the meeting, Mr. Gordon R. McGregor, President of Trans-Canada Airlines, will succeed Dr. W. Berchtold, President of Swissair, as President of the International Air Transport Association.

### Traffic Conferences

The Traffic Conferences have been convened for their usual worldwide Composite Session at Honolulu on November 2nd. Unlike the previous annual Traffic Conference meeting at Cannes in November 1952, which lasted 37 days, it is contemplated that this session will be able to complete its business in three weeks.

W. M. Sheehan*

* Legal Drafting Officer, International Air Transport Association.

# FEDERAL REVIEW

## REORGANIZATION PLAN NUMBER 10 OF 1953 — PRESIDENT'S PLAN FOR SEPARATE PAYMENT OF AIRLINE SUBSIDIES

*To the Congress of the United States:*

I transmit herewith Reorganization Plan No. 10 of 1953, prepared in accordance with the provisions of the Reorganization Act of 1949, as amended.

The reorganization plan provides for the separate payment of airline subsidies, which now are merged with payments for the transportation of airmail. The purposes of the plan are to place responsibility for subsidy payment in the agency which determines the subsidies and to enable the Congress and the President to maintain effective review of the subsidy program. The plan accomplishes these objectives by transferring from the Postmaster General to the Civil Aeronautics Board that portion of the present airmail payment functions which relates to subsidy assistance.

The reorganization plan will not alter the basic national policy of promoting the sound development of air transportation through Federal aid. Nor will the plan in itself change the aggregate amount of revenue for which any airline is eligible. The policy of providing financial aid for airline development was adopted in the Civil Aeronautics Act of 1938, and reflects the broad national interest in securing a system of air transport services adequate to the needs of defense, commerce, and the postal service. Federal aid provided under that act has contributed greatly to the rapid development of commercial air transportation during the past fifteen years. Continued subsidy support will be required for some time to enable certain segments of the industry to achieve the full measure of growth required by the public interest.

At present, airline subsidies are provided by means of mail transportation rates established by the Civil Aeronautics Board and paid by the Post Office Department. In essence, the Civil Aeronautics Act provides that such mail rates may be set at a level sufficiently high to overcome deficits incurred by the airlines on their total operations, including passenger and freight traffic. Total mail payments by the Post Office Department thus include, not only a reasonable compensation for the service of transporting the mail, but also a subsidy element where required to support the general program of airline development. This method of furnishing subsidy restricts the opportunity for congressional and public review, and substantially inflates the reported cost of the postal service.

Under the reorganization plan, the Civil Aeronautics Board will continue to determine the over-all level of payments to be made to the airlines, and will do so in accordance with the existing policy standards of the Civil Aeronautics Act. However, the Post Office Department will pay only that portion which represents compensation for carrying the mail on the basis of fair and reasonable rates determined by the Board without regard to the need for Federal aid. The plan will transfer to the Board the responsibility for paying any amounts in excess of such compensation, this excess being the subsidy element of the aggregate Federal payment.

In the interest of prompt effectuation, the plan contains an interim provision which authorizes the Board to establish without prior notice or hearing the initial rates to be paid by the Post Office Department, subject however to the right of the Board or any affected party to initiate a proceeding at

any time for a hearing and a determination of a new rate. The Board has already made studies estimating the subsidy element contained in airmail payments, and for some time has been setting forth in connection with its mail-rate decisions a breakdown between the subsidy and compensatory elements of the over-all rate. The plan will permit the Board to base the initial rates payable by the Post Office Department on the compensatory rates contained in these studies and decisions.

By providing for a complete and formal separation of subsidy from compensation for the transportation of mail, the reorganization plan will clearly fix the fiscal responsibility for the subsidy program in the appropriate agency. It will assure the Congress and the public of continuing information on the cost of this program. It will give the Congress an opportunity to review and take any appropriate action with respect to the level of subsidy aid in the course of the regular appropriation process. It will also result in a more accurate presentation of the cost of the postal service, by removing from the budget of the Post Office Department a nonpostal expenditure currently estimated at nearly $80 million a year.

The basic principle of airline subsidy separation was recommended in 1949 by the Commission on Organization of the Executive Branch of the Government. Legislation to accomplish separation has been under discussion for several years. Such legislation has generally gone beyond a simple transfer of the subsidy function, and has included provisions which would change existing substantive law. Some of these proposed substantive changes have been the subject of controversy, and have been responsible for the past delays in enacting legislation on this matter. The present reorganization plan provides an opportunity to accomplish immediately the important objective of transferring subsidy payment responsibility, within the framework of existing statutory policy. In view of the general agreement on the principle of subsidy separation, I trust that this plan will have widespread support.

At the same time, the immediate transfer of subsidy payment under this reorganization plan should not preclude the consideration by the Congress of legislation to effect refinements and modifications in the basic law in this field. One such change, for example, would be an amendment of the Civil Aeronautics Act to provide specifically that compensatory rates for mail transportation should be based upon the cost of rendering mail service, plus a fair return. I understand that the Civil Aeronautics Board has been following this general policy in those cases where it has established compensatory mail rates. The reorganization plan will not affect its right to continue applying such a policy in the future. However, I believe it would be appropriate to establish the cost principle as a matter of definite legislative policy.

After investigation, I have found and hereby declare that each reorganization included in the accompanying reorganization plan is necessary to accomplish one or more of the purposes set forth in section 2(a) of the Reorganization Act of 1949, as amended.

The reorganization plan, by providing a sounder basis for the administration and congressional review of the affected functions, should in the long run promote increased economy and effectiveness of the Federal expenditures concerned. It is not practicable, however, to itemize in advance of actual experience the reductions of expenditures to be brought about by the taking effect of the reorganizations included in the reorganization plan.

The White House,
June 1, 1953

DWIGHT D. EISENHOWER

## REORGANIZATION PLAN NO. 10 OF 1953

Prepared by the President and transmitted to the Senate and the House of Representatives in Congress assembled, June 1, 1953, pursuant to the provisions of the Reorganization Act of 1949, approved June 20, 1949, as amended.

### PAYMENT TO AIR CARRIERS

Section 1. *Transfer of functions.* — There are hereby transferred to the Civil Aeronautics Board (hereinafter referred to as the Board) the functions of the Postmaster General with respect to paying to each air carrier so much of the compensation fixed and determined by the Board under section 406 of the Civil Aeronautics Act of 1938, 52 Stat. 998, as amended, 49 U.S.C. 486, as is in excess of the amount payable to such air carrier, under honest, economical, and efficient management, for the transportation of mail by aircraft, the facilities used and useful therefor, and the services connected therewith at fair and reasonable rates fixed and determined by the Board in accordance with that section without regard to the following provision of subsection (b) thereof: the need of each such air carrier for compensation for the transportation of mail sufficient to insure the performance of such service, and, together with all other revenue of the air carrier, to enable such air carrier under honest, economical, and efficient management, to maintain and continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service, and the national defense.

Section 2. *Interim provisions.* — The Board may fix, without prior notice and hearing, the initial rates to be paid by the Postmaster General under this reorganization plan for mail transportation services rendered on and after the date when the plan becomes effective. At any time thereafter the Board upon its own motion may, and upon the petition of the Postmaster General or the carrier concerned shall, institute new proceedings to fix and determine, after notice and hearing, the rates to be paid by the Postmaster General in accordance with section 1 of this reorganization plan, and the rates so fixed and determined shall supersede the initial rates from the date of the motion or petition.

Section 3. *Incidental transfers.* — There shall be transferred from the Post Office Department to the Board so much of the personnel, property, records, and unexpended balances of appropriations, allocations, and other funds, employed, held, used, available, or to be made available in connection with the functions transferred by this reorganization plan as the Director of the Bureau of the Budget deems to be required for the performance of those functions. Such measures and dispositions as the Director of the Bureau of the Budget shall deem to be necessary in order to effectuate the transfers provided for in this section shall be carried out in such manner as he shall direct and by such agencies as he shall designate.

Section 4. *Effective date.* — The provisions of this reorganization plan shall take effect on the first day of the first calendar month following forty-five days after the date they would take effect under section 6(a) of the Reorganization Act of 1949, as amended, in the absence of this section, and shall be applicable only with respect to services rendered on and after the date on which the reorganization plan takes effect under this section.

## FEDERAL AIRWAY USER CHARGES*

"USER charges" refers to a system of payments to be made by the scheduled airlines, and other aircraft operators, to the Federal Government as compensation for use of the Federal air navigation and traffic control system.

### *Position of the Air Transport Association*

The Air Transport Association's Board of Directors has considered this matter at the last two December meetings. In December 1951 they aproved a draft statement proposed by the Transportation Association of America on public subsidies to transportation. This is part of a larger statement of national policy to which the ATA was urging all forms of transportation to agree. Following are the excerpts from the subsidy statement concerning airways user charges:

> . . . the ultimate aim in all forms of transport should be that user charges be paid by all classes of domestic transport facility users sufficient to cover their fair share of the cost of building and maintaining the Federal facilities which they need to use.
>
> In the case of domestic air transport and domestic water transport it is felt that in a country made strong by the principles of independence and self reliance, national policy should clearly be aimed at the ultimate payment of user charges sufficient to cover the user's fair share of the costs of building and maintaining the government facilities they need to use. The major problem here involved is that of timing. In the case of air transport, it is still a young industry with all but a few companies still to some degree dependent on government mail subsidy, and the result of the immediate application of such a principle could only be the closing out of a substantial part of the air transport service which has been so carefully nurtured toward self-sufficiency over the past 30 years. . . . It would certainly seem inequitable to apply abruptly the standard set forth in the opening paragraph to either the domestic air or water transport industries.
>
> In domestic air transportation the policy of the government should be to permit and encourage the operation of the air transport system on a basis which will most readily bring about a condition of self-sustenance, without subsidy, and the provisions of the Civil Aeronautics Act, including that section referring to "public convenience and necessity," should be administered with that requirement and objective in mind. Attention should first be focused on the placing of the carriers on a self-sustaining basis, without subsidy payments. As to airway user charges, the first step should be the exaction of user charges which, when taken with the industry's present contributions, will cover the fairly allocated share of the cost of maintaining and operating airway facilities provided by the government and reasonably needed and used by the carriers in their commercial operation. The second step should be to adjust the airways user charges so that they will cover in addition a reasonable proportion of the amortization of the value of future airways facilities supplied by the government. Allocations of cost should of course, reflect the government's active use of its own facilities plus its requirements for standby facilities for later periods of more active military use. Commercial users should not be forced to bear any share of the cost of government facilities which are not necessary for commercial operations.
>
> It should be the responsibilty of the Civil Aeronautics Board (or any agency successor to its powers) to report to Congress once every two years on the extent to which the industry, in whole or in part, has reached a state of maturity which makes it possible for it to stand on its own feet, concentrating upon the inherent advantages of its special form of transportation. In the same report the Agency should state to Congress the measures which it has taken under the Civil Aeronautics Act to accelerate the attainment of such a state of maturity. In reaching its conclusions the agency should, of course, consider not only the amount, if any, of subsidy payment by the government and the earnings of the companies

* Report by Ralph Rechel of ATA Economic Research Department, to the meeting of the ATA Public Relations Advisory Committee, Los Angeles, January, 1953.

but also the taxes paid and discounts allowed to the government by the companies as well.

In December 1952 the Air Transport Association's Board unanimously decided that

> (1) Any studies conducted by the government for the purpose of imposing users charges for the use of Federally-provided facilities should not be directed at the airline industry alone, but should include all other forms of transportation.
>
> (2) In connection with any such studies, the apportionment of costs among the users of the Federal airways should reflect substantial charges for the military standby value of those facilities, and the costs should be allocated among the airway users on use at the period of peak loads (viz., on the basis of the peak-of-demand concept).
>
> (3) The Association and the individual airlines should make every effort to obtain public recognition of the fact that the airline industry, through the Federal gasoline and oil tax, is currently paying substantial user charges to the Federal Government and that this payment, which will amount to approximately $12,000,000 in 1952, is entirely sufficient to cover the airlines' fair share of the cost of the Federal airways.

*What is the Federal Airways System?*

The Federal Airways System is a network of airspaces 10 miles wide, and of indefinite altitude, that connects all cities served by certificated airlines plus some military flying fields. The Administrator of Civil Aeronautics has the authority to designate and establish the Federal airways. The airways system furnishes four services to all airplanes equipped with radio receivers and transmitters: air-ground communications, enroute and airport traffic control, enroute navigation aids, and special low visibility final approach aids. These aids are available along about 75,000 miles of domestic airways and at approximately 160 of the busiest airports.

The airways services are supplied to pilots by a wide variety of facilities operated by the Civil Aeronautics Administration. No attempt will be made to describe these facilities in detail in this attachment. However, we may divide these facilities into two groups. The first group operates automatically and requires no personnel except maintenance technicians. These facilities include enroute navigation aids (4-course ranges, fan markers, omni ranges) and most navigation aids used in the approach procedures at airports. One of the latter, the Instrument Landing System, is usually turned on only when the weather requires it. These facilities either broadcast continuous radio signals, or, produce light beams in the case of beacon lights. The second group of facilities require the presence of operating personnel at all times. These facilities include aviation communications stations and enroute and airport traffic control services. Most of these services are available 24 hours a day except for a small number of airport control towers at the less active airports.

*Who Uses the Federal Airways System?*

Every airplane and every pilot may use the Federal Airways System if the flying is done within any of the areas designated by the Administrator of Civil Aeronautics as airways. Airplanes with no radio equipment may use beacon lights along the airways at night and may be given traffic control directions by light gun at any of the 160 airports with CAA traffic control towers. Unequipped airplanes may also use CAA intermediate landing fields, either for emergency purposes or as a destination. These airfields are equipped with runway lights and a rotating beacon and most have caretakers and telephone service. Airplanes with radio receivers only may receive weather broadcasts, traffic control instructions, and may receive signals from navigation aids if they can tune the necessary frequencies. Airplanes equipped with both transmitter and receiver may use all of the services listed above and can also ask questions of communicators and traffic controllers, report their positions for traffic control purposes and verify traffic control

instructions. The addition of receiver channels for signals from navigation aids and instrument landing systems allows the pilot to use all of the services of the airways system. The only limiting factors are the amount of radio equipment in the airplane and the amount of flying that is done within charted airways. It should be noted that pilots must be licensed for instrument flying in order to fly on the airways and use the aids when weather conditions are below allowances for visual flying. In summary it may be said that *all* airplanes may receive some use from the airways system and aircraft with basic radio equipment may use most of the airways services.

*What is Use of the Airways*

It is evident from the description that most of the use of the airways is through radio contacts. All airways services are actually communications of one kind or another, some by voice and others by continuous code signals. Pilots may communicate with CAA facilities by telephone on the ground to file flight plans and receive weather aid airport information.

There is no record of the use of the navigation aids which broadcast continuous signals and have no operators in attendance. All counts that measure the use of the airways are made by the people in the communications stations and traffic control towers and centers. These counts are the only means available to determine the amount of use any airplane or group of airplanes makes of the system.

*What Are the Problems and Principles of Allocating Costs?*

The problem of allocating costs is that of assigning "fair shares" of costs, or responsibilities for incurring costs. The airplanes using the Federal Airways are divided into three groups in the CAA statistics on airways use and, since these groups are suitable for making the initial allocation of user charges, we have made all our trial calculations using the same arrangement. The initial allocation of user charges is between groups and the secondary allocation is between individuals within the groups. The latter problem is solved by our chosen method of collection. The user groups are: 1) Scheduled Airlines; 2) Other Civil Users (included are irregular carriers, fixed base operators, business and industrial flying, and private flying); 3) Military (includes Air Force, Army, Navy, and Coast Guard).

The first consideration in making the cost allocation to the three groups is how much should be allowed for military standby. After considering; a) the volume of traffic generated by the military during World War II (Military Operations were about 65% of total traffic in 1944) and projecting it to a future full-war emergency, b) the fact that the military can instantly commandeer the use of all or any part of the airways system in time of such emergency, and c) the operational priorities the military presently receive, it is our judgment that one-third of the cost of the airways should be set aside for military standby before allocations are made on the basis of the use and cost of the system.

In arriving at the second part of the allocation formula the Association has considered all of the methods proposed in the past for fixing user charges (by CAA and other governmental studies) and all methods commonly used by public utility commissions in fixing rates for utility services. The airways system fulfills the common definition of a public utility as it is a natural monopoly operated by a single organization; its use is indispensable to a large portion of the users; and its services are available to all sectors of the public who wish to use it. After comparing the airways to other public utilities we have found that elements of rate-making used in the telephone and electric power industries are most applicable to allocating cost responsibilities of airways users. It is our judgment that the two-thirds of the annual cost of the airways, remaining after military standby value has been de-

ducted, should be allocated among the user groups in proportion to their use of the airways system at times of peak damand, that is during the days of highest traffic density along the airways and at airports.

### *What is the Annual Cost of the Airways and What Are the Shares of the User Groups?*

The government does not produce figures which give an annual cost of the domestic airways system. However, using CAA's accounting records, the Association has estimated the cost of the airways for fiscal year 1952, ending June 30, 1952, as approximately $67,000,000. This includes maintenance, operation, overhead and amortization of the capital investment in airways facilities.

The military standby value (33.3%) in dollars is approximately $22,600,000. The remaining $44,400,000 is divided as follows, using traffic at the peak of demand: Scheduled Airlines, $11,300,000; Other Civil Users, $14,800,000 and Military $18,200,000. It should be noted that the military standby value does not include any allowance for the military traffic currently operated over the system.

*What the Scheduled Airlines are Paying Now.* On the basis of estimated gasoline consumption for calendar year 1952, and at the present federal tax rate of 2c per gallon, the scheduled airlines paid $11,500,000 in gasoline taxes to the Federal Government. In addition oil is taxed at 6c a gallon and on the basis of the estimated oil consumption for 1952 the airlines paid $456,000. It is obvious that these amounts adequately cover the allocated share of the scheduled airlines. It should be emphasized that these amounts are for gas and oil taxes alone and do not include any other income, excise or transportation taxes the industry pays to, or collects for the government.

*The Gasoline Tax as a User Charge.* Gasoline taxes charged to passenger cars, trucks and buses by the state and Federal governments for many years have always been publicly regarded as a charge, or tax, to the user to defray the cost of building and maintaining the highways. Many statements to this effect may be found in state and Federal legislative history.[1] Some of the statements to be found in Federal legislative history are included as an appendix.

The aviation gasoline tax was established at the same time as the Federal automotive gasoline tax in the Revenue Act of 1932. At that time aviation gasoline consumption was very small. Federal expenditures on the airways were $8,000,000 a year and were justified as providing air mail service. There

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[1] Representative Will M. Whittington (Mississippi), one time Chairman of the House Committee on Public Works, made the following statement in supporting the Highway Act of 1948 on the floor of the House of Representatives:

> There was collected in the calendar year 1946 from all sources from gasoline and other Federal excise taxes $882,000,000. This bill authorizes in round figures an appropriation of $557,750,000 for all purposes. In other words, this program is self-liquidating. It has been self-liquidating from the beginning. Those who use the roads pay for them and that is the soundness of this legislation. (Congressional Record, House, April 12, 1948, p. 4337.)

Representative Walter M. Pierce (Oregon): (1938)

> There is no other excuse for the National Government levying a tax on gasoline except that it will be contributed for road work. Oregon was the pioneer State in collecting gasoline tax. We approve of this method of raising money for road work. The nearly two hundred millions collected by the National Government from the gasoline tax, and the nearly one hundred millions collected in general taxes on motor vehicles and parts is very justly and properly appropriated to the highways of the various States under the present authorization. (Federal-Aid Highway Act, Hearings before the Committee on roads, House of Representatives, 75th Congress, 3d Session on HR, 8838, p. 557.)

Representative John J. Dempsey (New Mexico): (1938)

> I think the Federal participation with States in highway funds has been

were few other users of the airways. There was no Federal money spent on non-military airports at that time. As a result of these factors there is no mention of the position on aviation gasoline taxation taken by the Congress in 1932. The airplane is just one of several gasoline powered machines which were included in the language of the Bill. We regard the aviation gas tax as a user charge in exactly the same way that automotive gas taxes are regarded. The tax pays for our share of the skyways in the same sense that the auto tax pays the driver's share of the highway cost. It should be noted that size and weight of the airplane has no effect on the skyway, in terms of wear and tear, such as is the case with trucks and buses on the highways.

*User Charges in the Future*

The present 2c gas tax rate was instituted in November 1951 and will of course increase the revenues to the government in proportion as the amount of traffic and size of airplanes increases. This tax rate adequately covers the cost of the airways system as it currently exists. There is little question but what the cost of the system will increase as the Common System is completed and the new traffic control devices, now in the research stage, are completed and installed. We cannot estimate whether the increase in traffic will be sufficient to raise Federal income at the rate of increase necessary to meet airways costs. But we believe this is the best method of collecting user charges because it can be increased or decreased easily to keep user charge payments on parity with the industry's fair share of the costs. We also favor the gas tax because it requires no new legislation, is presently in operation and is simple and inexpensive to collect and because it treats the various users equitably.

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one of the most desirable things that we have done, and when you talk about in the past 5 years spending $1,500,000,000, which is true, to assist the States, we should also show that the Federal Government received about $1,400,000,000 back in direct taxes for that specific purpose. (Federal-Aid Highway Act, Hearings before the Committee on Roads, House of Representatives, 75th Congress, 3d Session on H.R. 8838, p. 578.)

Senator Carl Hayden (Arizona): (1938)

What are the revenues which the Federal Government collects from those who use the roads? I have here a tabulation which covers the period from 1916 to 1936, which is the entire life of the Federal Highway Act. In the 20 years there was collected by the Federal Government, from excise taxes relating to motor vehicles, a total of $2,033,922,000. During the same two decades there was appropriated by Congress $1,987,655,000. During that 20-year period we collected more from those who used the highways than the Federal Government expended upon the highways.

In the message now before the Senate the statement is made that during the last 5 years there has been appropriated for public highways, including allotments from emergency appropriations, the total sum of $1,490,000,000.

I shall place in the Record a statement obtained from the Bureau of Internal Revenue showing the collections made from highway users during the past 5 years. Even in the period of depression, when the Federal Government was appropriating more money than ever before for highway construction, when $1,490,000,000 was expended, there was collected $1,337,000,000 from the motor-vehicle taxation, so that those who use the roads have practically paid the entire cost of all the work done with Federal funds on the roads, both for regular Federal aid and by way of emergency-relief expenditures. (Congressional Record, Senate, November 30, 1947. Reprinted in Federal-Aid Highway Act, Hearings before the Committee on Roads, House of Representatives, 75th Congress, 3d Session on H.R. 8838, p. 605.)

Mr. M. W. Watson, Vice Chairman, Highway Division, Association General Contractors of America, Inc.: (1938)

There is no reasonable excuse for the present excise tax on motor-vehicle owners, which is an additional tax to those levied against other citizens, except as a charge for the use of roads built by Federal funds. (Federal-Aid Highway Act, Hearings before the Committee on Roads, House of Representatives, 75th Congress, 3d Session on H.R. 8838, p. 159.)

# ANNUAL REPORT OF THE STANDING COMMITTEE ON AERONAUTICAL LAW, AMERICAN BAR ASSOCIATION FOR 1953

YOUR Committee on Aeronautical Law herewith presents its Annual Report and Recommendations for 1953, a year which marks the 50th Anniversary of power flight:

## INTERNATIONAL CONVENTIONS

The current and widespread anxiety emanating from many quarters over the growing tendency toward disregarding the distinction between domestic and international matters in the exercise of the treaty-making powers of the United States is reflected in recent resolutions of the American Bar Association and the so-called Bricker Amendment to the Constitution, now under consideration in the United States Senate. These proposals to limit the presently established treaty-making power are of great interest to your Committee, coming as they do at a time when major treaties in the field of aeronautical law affecting private rights of United States citizens are presently under consideration. We refer to the Warsaw Convention of 1929 governing the liability of air carriers to American citizens for injury or death in international air travel and the proposed Rome Convention governing the liability of international air carriers to American citizens for surface damage caused by aircraft of other nations. Each of these treaties is now under consideration by the government of the United States, the Warsaw Convention for proposed changes, and the Rome Convention for original adherence.

### *Warsaw Convention*

In January, 1952, a subcommittee of the Legal Division of the International Civil Aviation Organization met in Paris and produced a draft revision of the Warsaw Convention. This Convention which originated in 1929 and was adhered to by the United States in 1934, governs the liability of air carriers with respect to passengers killed or injured in international air transportation. The January, 1952, draft revision of this treaty is now being considered by the United States Government so that it may present its position with respect to proposed changes in the treaty when the Legal Committee of the International Civil Aviation Organization again meets in August, 1953, at Rio de Janeiro. The Legal Committee may at that session conclude its study and adopt a draft for submission to the ICAO Council with the recommendation that it be submitted to the ICAO Assembly or to an international conference for finalization.

Your Committee is following this matter closely and will report fully when ICAO takes final action.

### *Rome Convention*

A diplomatic conference convened under the auspices of the International Civil Aviation Organization in Rome, Italy, in September and October, 1952, at the invitation of the Italian Government, completed work on, adopted and opened for signature and ratification or adherence a new Convention on Damage Caused by Foreign Aircraft to Third Persons on the Surface. Thirty-two nations including three which were represented by observers, participated in the work of the conference. Fifteen nations signed the resulting Convention at Rome, October 7, 1952, and three more nations have signed it in the intervening period. No nation has yet ratified it. It will become effective as between the nations which have ratified it on the ninetieth day after the instrument of ratification of the fifth nation is

deposited with the International Civil Aviation Organization. The Convention remains open for signature by any nation until it becomes effective and for adherence without signature at any time thereafter.

This revised Convention has as its purpose the provision of uniform rules and limits of liability applicable to the operator of an aircraft for damages caused to persons or property on the surface in a nation other than that in which the aircraft is registered. It also contains provisions governing the manner in which the nation overflown may assure itself that the operator of the overflying aircraft has insurance or other security for any liability which may eventuate under the Convention. The Convention has no application whatsoever to domestic aircraft.

The United States did not sign the Convention at Rome and has not done so since. Although it possessed the appropriate powers to sign a convention the United States Delegation considered that the Convention, as adopted, contained provisions which depart so substantially from the United States views and posed such important problems of law and policy as to require further careful consideration and analysis. Among the major problems presented which it was felt warranted further consideration are:

(1) The inclusion of the principle of absolute liability of the operator for any damage caused by his aircraft, regardless of the existence of fault. The United States sought a convention predicated on a rebuttable presumption of fault.

(2) The relatively low limits of liability provided, particularly with respect to large transport aircraft. The Convention contains a scale of limits starting at approximately $33,000 and increasing according to weight, but with the rate of increase becoming progressively lower as the weight increases. Under this scale, the maximum liability for the largest plane in commercial operation today would be approximately $800,000. The United States sought substantially higher limits.

(3) The provision of an individual limit of liability for injury or death of any one person of $33,000. The United States opposed any individual limit and particularly one limiting liability for personal injury.

(4) The provision whereby absolute liability without any limit in the amount thereof is imposed in cases of deliberate acts done with the intent to cause damage, including cases where such acts were those of a servant or agent acting in the course of his employment and within the scope of his authority. The United States contended that, having adopted the principle of absolute liability, the limits provided by the Convention should be removed only in the most extreme circumstances involving intentional wrong doing amounting in effect to criminal intent, and that in cases of acts of servants or agents, such unlimited liability should be imposed on the operator only when the act is done pursuant to express authority.

(5) The provisions governing security for the operator's liability which incorporate the principle that the nation being overflown, while entitled to require insurance or other security for an operator's liability, is compelled to accept as sufficient evidence of the financial responsibility of an insurer the certificate of the nation of registry of the aircraft or of the nation of the domicile of the insurer as to such financial responsibility. This approach also required elaborate provisions for the administration of this system of certificates. The United States urged that the country overflown should be entitled to satisfy itself as to any reasonable doubts in respect of financial responsibility of the insurer.

(6) Inclusion in the Convention of the so-called "single forum" solution of the problem of jurisdiction, under which actions for damages under the Convention can be brought only in the courts of the states where the damage occurred, except in certain limited circumstances where the

parties agree upon a different forum, requiring that judgments rendered in the single forum be executed in other states, subject to specified exceptions. The United States urged provisions which would have permitted considerably more flexibility in the choice of forum while at the same time assuring the defendant an opportunity to preserve the limits of liability.

As stated, the proposed Rome Convention would limit the recovery by American citizens for damages on the surface caused by aircraft of other nations to amounts ranging from $33,000 to $800,000, depending upon the weight of the aircraft causing the damage. Your Committee is making a careful study of this Convention and will report its recommendations to the House of Delegates upon completion of that study.

### AIRPORTS

In its Annual Report for 1952 your Committee briefly reviewed "The Airport and Its Neighbors," the report of the so-called Doolittle Commission established by President Truman to examine the problem of airport location and use. It will be recalled that the Commission was appointed to study this problem following a series of aircraft accidents in congested areas near airports in early 1952. The Department of Commerce was designated to seek ways to implement the recommendations contained in the Doolittle Commission Report and in December, 1952, the Department released its proposed program to carry the recommendations into effect.

One recommendation of the Doolittle Commission requires that the dominant runways of new airport projects should be protected by cleared extensions at each end at least one half mile in length and one thousand feet wide. This area would be completely free from housing or any other form of obstructions and would be considered an integral part of the airport. A further recommendation requires a fan-shaped zone, beyond the half-mile cleared extension at least two miles long and six thousand feet wide at its outer limits to be established at new airports by zoning law, air easement or land purchase at each end of dominant runways. In this area the height of buildings and the use of land would be controlled to eliminate the erection of places of public assembly, churches, hospitals and schools and to restrict residences to the more distant locations within the zone.

The Department of Commerce approves of these recommendations and as part of its program of implementation urges the amendment of the sponsor's assurance agreements made in connection with the expenditure of Federal funds under the Federal Airport Act of 1946 to include covenants not to permit any structures in any cleared runway extensions owned or controlled by the sponsor and not to use the approach zones for sponsor-owned places of public assembly or other land uses resulting in concentrations of people, such as schools and hospitals.

The Doolittle Commission recommended that the authority of the Federal, State and municipal governments with respect to the regulation of the use of airspace should be clarified to avoid conflicting regulations and laws. The Department of Commerce concurred in this recommendation. See page 221, *infra,* for a discussion of pending litigation in the United States District Court for the Eastern District of New York over the rights of a municipality to prohibit the flight of aircraft over its territory at an altitude of less than one thousand feet.

One recommendation of the Doolittle Committee in which the Department of Commerce did not concur is that the Civil Aeronautics Act of 1938 be amended to require certification of airports necessary for interstate commerce and to specify the terms and conditions under which air-

ports so certified shall be operated. Certificates would be revoked if minimum standards for safety were not maintained. The Department of Commerce is of the position that no such amendment of the Civil Aeronautics Act is necessary as there already exists adequate control over airport use in the Civil Aeronautics Administration operating authorization to scheduled and large irregular air carriers. With respect to the arbitrary closing or abandoning of major airports the Department of Commerce observed that the assurances made by the sponsors of projects under the Federal Airport Act require continued operation of those airports improved with Federal funds, which includes virtually every major airport.

### Conflict Between Local and Federal Regulations

One development which may have far-reaching consequences is the litigation now pending in the United States District Court for the Eastern District of New York, *All American Airways, Inc., et al.* v. *Village of Cedarhurst, et al.*

The Village of Cedarhurst, which lies off the end of one of the principal runways of the New York International Airport (Idlewild), adopted an ordinance which would have prohibited the operation of aircraft over the village at an altitude of less than 1,000 feet. Because of the effect of the ordinance upon operations at the airport, the New York Port Authority, which operates the airport, certain airlines using the airport, and the Air Line Pilots Association brought an action to enjoin enforcement of the Cedarhurst ordinance. The Civil Aeronautics Board and the Civil Aeronautics Administration intervened as plaintiffs.

On motion of the plaintiffs, the District Court granted restraining orders and a preliminary injunction. In his order granting the temporary injunction (106 F. Supp. 521, E.D.N.Y. 1952), Judge L. F. Rayfiel found that the ordinance conflicted with the Civil Air Regulations and, for that and other reasons, was unconstitutional.

On appeal from the preliminary injunction, the order was affirmed but the Court of Appeals for the Second Circuit avoided any expression of opinion on the validity of the ordinance. In their answer, the defendants have questioned the validity of the Civil Air Regulations involved and have counterclaimed, introducing theories of trespass, nuisance, and unlawful taking of property without compensation. The matter is now awaiting trial on the merits.

### Suspension of Authority to Serve Designated Points

Extensive litigation during the past year has apparently sustained the Civil Aeronautics Board's power to suspend the authority of an air carrier to serve designated points. As a part of the Board's efforts to promote the development of the local-service airline system, it ordered Western Air Lines and United Air Lines, in separate proceedings, to suspend their operations at certain points, and authorized certain local service operators to serve those points. Both carriers appealed these orders to the appropriate Circuit Court of Appeals. The carriers argued that the Board's order amounted to a partial revocation of their certificates of convenience and necessity, and thus was invalid. The Board, on the other hand, contended that the order amounted to a temporary suspension which they were able to order whenever they determine that the public convenience and necessity so required. The Courts of both the Ninth Circuit and the Seventh Circuit upheld the Board's orders. In both instances the Courts stressed the temporary nature of the suspension action; and, while indicating that the Board, pursuant to its statutory authority to alter, amend, or modify certificates, probably had some authority to make permanent route realign-

ments among air carriers if such realignments did not change the essential character of the air carriers' operations, the Courts reserved their opinions on that issue as applied to these cases. *Western Airlines, Inc.* v. *Civil Aeronautics Board,* 196 F. (2d) 933, *cert. den.*_____U. S._____, 97 L. Ed. (Adv. p. 58); *United Air Lines, Inc.* v. *Civil Aeronautics Board,* 198 F. (2d) 100.

### Air Mail Subsidy Separation

The effort to secure legislation which would provide for the separate identification of air mail compensation and subsidy continued during the past year, with extensive hearings being held before the House Interstate and Foreign Commerce Committee. The bill before the Committee had previously been passed by the Senate. The House Committee reported the Senate bill with very substantial amendments, but it was not possible to secure the enactment of the legislation prior to the adjournment of the 82nd Congress. Consequently, this legislation is again on the docket of both the Senate and House Committees on Interstate and Foreign Commerce.

It is now questionable whether these Committees will undertake consideration of the legislation, in view of their busy schedules, since the Civil Aeronautics Board has, in effect, accomplished the purpose of the legislation administratively. The Board has issued three reports which identify the air mail compensation and subsidy by carrier, and in all mail rate decisions involving a granting of subsidy the Board identifies that portion of the total amount to be paid which is air mail compensation and subsidy. (Editor's note. See page 210 for President's Reorganization Plan Number 10, 1953).

### Privileged Government Documents

A recent decision of the United States Supreme Court in *United States* v. *Reynolds, et al.,* decided March 9, 1953, arising out of an aircraft accident, is of extreme importance in the field of privileged documents. A B-29 aircraft crashed in Georgia while testing secret electronic equipment for the Air Force. Six of the nine crew members and three of four civilian observers were killed in the crash. In a suit by the representatives of the deceased civilians against the United States under the Federal Tort Claims Act, the plaintiffs moved under Rule 34 of the Federal Rules of Civil Procedure for production of the Air Force's official accident investigation report. Following the submission for the Air Force of a formal claim of privilege on the grounds that the aircraft was engaged in a highly secret mission of the Air Force, the District Court ordered the Government to produce the documents so that it might determine whether they contained privileged matter. The Government declined to do so and the Court entered an order that the facts on the issue of negligence would be taken as established in the plaintiffs' favor. After a hearing to determine damages, judgment was awarded the plaintiffs. The Court of Appeals affirmed. The Supreme Court reversed, holding that under the circumstances the District Court should have accepted the Government's claim of privilege. The Court also indicated that the plaintiffs should have accepted an alternative Government offer to produce for examination the surviving crew members without cost to the plaintiffs. It remains to be seen how great an effect this decision will have upon claims against the United States arising out of accidents involving Government aircraft. It is to be hoped that the decision will not be abused and that in such cases vital information necessary to the plaintiffs' claims will not be withheld on the ground of privilege unless absolutely necessary to the public interest.

## Legal Status of Helicopters

The tremendous impetus given to helicopter development, production, and use by the Korean experience has greatly advanced the manufacturing art and production facilities. By the end of the 1952 the backlog of orders exceeded $500,000,000. The overwhelming bulk of this was military, but commercial deliveries are increasing and will probably grow rapidly. Federally certificated operations are established in the Los Angeles, Chicago, and New York Metropolitan Areas. Contract helicopter companies are conducting extensive operations. This means that the laws and regulations of the Federal Government, of the states, and of municipalities which are applicable to helicopters will become increasingly important.

The unfortunate legal status of the helicopter at the moment is that it is misclassified. Because it navigates through the air, it is automatically included in the broad definition of "aircraft." All of the vast body of Federal, State, and local laws, regulations, and decisions built up over many years for application to fixed-wing airplanes, is applicable to helicopters, unless exceptions are made, because such laws, regulations, and decisions have always been made applicable to "aircraft." The helicopter, however, which can rise vertically or at any angle, can stand still or proceed at any rate in any direction from zero to maximum speed, which has no forward stalling speed, and which needs no airport but only a small space in which to land, is in a class by itself.

The Federal Government has recognized this in certain of its regulations. Parts 60.17 and 60.30 of the Civil Air Regulations except helicopters from certain altitude and flight visibility minimums applicable to fixed-wing airplanes. An extremely limited number of States have done likewise.

The National Association of State Aviation Officials (NASAO) has recently established a Special Helicopter Committee. One of that Committee's functions is to aid in the re-examination of State laws with a view to making appropriate exemptions or exceptions for the helicopter from aircraft laws and regulations which should be inapplicable to helicopters. One typical illustration of this need is that in many States no "aircraft" can land on or take off from anything but an "airport" which must be duly licensed by State authorities. Sometimes minimum standards for airports (such as the minimum length of runways) are prescribed in the law. Obviously, these provisions should not be automatically applicable to helicopters. A small "heliport" several times the diameter of the helicopter's rotor system, quite inexpensive, and located in the areas where people come from and go to, i.e., congested areas, is a far different matter than an expensive outlying airport.

Laws, rules, regulations, and airport programs designed for applicability to fixed-wing airplanes should be re-examined for non-applicability to the helicopter.

Respectfully submitted by the

| Aeronautical Law Committee | Advisory Committee |
|---|---|
| Charles S. Rhyne, Chairman | Robert K. Bell |
| Calvin M. Cory | Madeline C. Dinu |
| William H. Burton | William A. Gillen |
| Palmer Hutcheson, Jr. | Robert S. Lindsey |
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| Stuart G. Tipton | Gibson B. Witherspoon |

# STATE AND LOCAL REVIEW

## FEDERAL AID AIRPORT PROGRAM — POSITION OF NASAO*

THE Honorable Robert B. Murray, Jr., Undersecretary of Commerce for Transportation, recently stated that the Department of Commerce had commenced a re-evaluation of the role of the Federal Government in assisting in airport financing and that the Program for Federal aid to airports would be halted while errors in administration are corrected and the future role of the Government in municipal and state airport construction was determined.

The Association, to which I shall refer hereafter as NASAO, for many years prior to 1946, advocated the enactment of legislation by Congress which would establish a long range program for the development of a national system of airports.

The NASAO now strongly endorses a thorough study and re-evaluation of the past administration of the Program as proposed by Mr. Murray, but we do not concur in the theory that the Program should be discontinued while the re-evaluation is being conducted, any more than you would stop feeding a sick child until a determination was made as to the type of medicine required.

The 79th Congress of the United States, after a long and careful study of the needs of air commerce and general aviation, determined that a national airport plan and a system of public airports, adequate to meet the needs of civil aeronautics, should be developed; and that the public interest, the national economy, the postal service, and the defense of the United States justified Federal participation on a 50-50 basis in their development.

The Federal Airport Act subsequently adopted by the Congress became Public Law 377, May 13, 1946. This Act outlined the manner in which, and defined the extent to which the Civil Aeronautics Administration might legally participate in a Federal Aid Airport Program. As late as September 1950, the Congress again recognized the justification of Federal participation in the development of public airports when it extended, by amendment, the life of the Act from seven to twelve years, or until June 30, 1958. The Act authorized annual appropriations amounting in the aggregate to $500,000,000 over a period of seven fiscal years, appropriations for any one year were limited to $100,000,000.

### *All Airports Serve Interstate Air Travel*

NASAO and other sponsors of the legislation intended that the development of airports should parallel and meet the growing requirements of civil aeronautics, while providing a standby system of airports available to the military services in time of war.

The extent to which the Federal Aid Airport Program has been implemented during the past seven years, in comparison with the expansion of flight operations from civil airports and the public use of scheduled and non-scheduled aircraft for the transportation of passengers, airmail and air freight, is indicated by the following statistics compiled by various governmental agencies.

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* Statement by A. B. McMullen, Executive Secretary, National Association of State Aviation Officials before the Senate Subcommittee on Appropriations, April 16, 1953.

| | | | % Increase |
|---|---|---|---|
| Air Carrier Operations .. | 2,357,826 | 4,866,358 | 106% |
| Air Passengers .... .... | 1,142,113 | 25,284,225 | 2200% |
| Airmail (ton-miles) ..... | 6,141,461 | 69,270,964 | 1100% |
| Air Freight (ton-miles) . | 8,859,008 | 161,003,935 | 1900% |

| Federal Aid Airport Program Funds | *Authorized* | *Appropriated* (*Fiscal* 1947-53) | |
|---|---|---|---|
| | 500,000,000 | 214,000,000 | 42%** |

** Amount appropriated 42% of amount authorized.

The remarkable growth of the airline transportation industry, as the above statistics disclose, together with a greatly improved safety record, is attributable in no small degree to the airport facilities which have been provided. Part of the increased business of the airlines has resulted from the gradual expansion of their operations to more cities and more airports. It should be noted, however, that only about 600 places in the U. S. are accessible by scheduled air transportation, whereas there are hundreds of other communities that will be and are being integrated into the airline system by charter and air taxi operators flying from local airports to airline terminals.

Although the number of civil aircraft in use, other than air carrier, during the period 1946-1952, fluctuated considerably, the use of privately owned aircraft for fast and essential transportation by corporations, proprietary business concerns, and professional people has rapidly increased during the last five years. In 1951 corporation operated aircraft totaled more than 9,000, while with more than 7,500 additional planes were used part time for business. Executive transports flew a billion passenger miles in 1951, and the number of miles flown by this type of aircraft is steadily increasing. More multi-engine aircraft are operated by businesses than by all the domestic scheduled airlines concerned. A large percentage of the flights made by these aircraft are to small communities all over the U. S. where branch factories, suppliers, or customers are located. Every airport and landing strip serves interstate as well as intrastate air travel in the same manner that highways and waterways serve interstate transportation.

The use of aircraft as a tool of the farmer has made rapid strides during the past ten years. In many localities the airplane is completely revolutionizing farming methods, while reducing cost and materially increasing production. The Civil Aeronautics Administration reports more than 8,000 planes now being used in connection with land management.

The Federal Government has participated in the development and improvement of an extensive farm-to-market system of roads; in fact, approximately 110,000 miles, or one quarter of the entire secondary highway system of the U. S., has been the recipient of Federal aid, in addition to the primary, rural and urban systems. It would appear that a similar policy with respect to the development of airports designed for agricultural, as well as for other civil aviation purposes, would be in the national interest.

*What the States and Municipalities Have Done to Carry Out Their Obligations as Partners in the Program*

In the early years of the Program, progress was limited due to the time required for the CAA to promulgate its regulations for administering the Program, and establishing working contacts with the non-federal sponsors. It also required time for the states and municipalities to set up their respective enabling legislation or ordinances, appropriate or obtain funds from bond issues and tax levies.

Based upon the intent as expressed in the Federal Airport Act at the time of its adoption, and the appropriations authorized thereunder, the various states, counties, municipalities, and airport authorities throughout the U. S. and its territories, began to develop their airport improvement programs upon the assumption that within the standards established by the Civil Aeronautics Administration and the annual appropriations made available by Congress, Federal assistance would be available in meeting project costs.

After the initial time lag, the tempo of state and local implementation of their part of the joint undertaking increased annually until about 1950 when the financial readiness of the states and local municipalities exceeded Federal appropriations and contractual authority, and since that time the gap has grown steadily greater. A recently conducted survey indicates that interested sponsors have available, or could obtain during fiscal years 1953-1954, a total of approximately $150,000,000.

Many sponsors are holding appropriations or proceeds from bond sales which were made expressly for airport development in connection with the Federal Aid Airport Program funds and which cannot be otherwise used. State funds which have been appropriated for the purpose of matching Federal Aid Airport funds will lapse unless the program is continued or tapered off at a reasonable rate. Many municipalities and airport authorities have funds which are laying dormant, but upon which taxes must be levied annually to service the specified principal and interest payments thereon.

States and municipalities, in good faith, have relied upon not only the letter, but the spirit of the Federal Airport Act, and a feeling is now being generated that there has been a breach on the part of the Federal Government of the basic elements of good faith and credit in a partnership undertaking.

*Present Status of the Federal Aid Airport Program*

For the past seven years Congress has made annual appropriations, although much too small, for meeting the Federal Government's share of the program. As previously stated, Congress also extended the life of the Act for another five years, beginning July 1st of this year. Therefore, the states and their political subdivisions might logically assume that the Federal Aid Program would be continued without interruption.

On this assumption many sponsors have proceeded to expend large sums for land acquisition, engineering, legal and other costs pertinent to the development of their airports. Dozens of project applications have been submitted to the CAA during the present year and many more are in the process of submission. These projects were developed in accordance with the provisions of the Federal Airport Act and the regulations of the CAA, and usually with the assistance of Federal representatives, under the assumption that the projects would be included in the fiscal 1953 or 1954 programs.

Many of the proposed projects have reached the grant agreement stage in the administrative process under which the program is administered, and are, therefore, legal contracts on which the Federal Government cannot default. There are, however, a very substantial number of project applications which have been pending in CAA and Department of Commerce offices for many weeks. In this category are many projects which lack only the administrative act of signing in order to go forward. On some of them authority to advertise for bids had been given by the CAA prior to the administrative "freeze" order in mid-February. Bids have been received on many projects, but unless accepted soon will not be binding. In many cases the opportunity to obtain slack season bids has been lost.

*Questionnaire of State Aviation Officials on Liquidation of Federal Aid Airport Program*

The Aeronautics Commissions in the various states and territories are required by law to foster, develop and promote aviation of all types within their respective states. No group of individuals, day by day come into closer contact with all phases of aviation, or more people actively engaged in all types of aviation, than the members and staff officials of these agencies.

In order to accurately determine their views regarding the recently proposed "liquidation" or summary curtailment of the Federal Aid Airport Program, a questionnaire was addressed to the 45 states and territories who are active members of NASAO. When the questionnaire was circulated, it was suggested that the individual State Aeronautics Directors or Commissioners to whom it was addressed, consult with their Aeronautics Commission members and their State Governors before replying to the questions in order that an official state position pertaining to Federal aid for airport development could be determined.

Forty of the forty-five states and territories to whom the questionnaire was addressed replied. Of the 40 states replying, 3 reported that an official state position had not yet been determined. The questionnaire was limited to the following four specific questions:

> *Question* 1: Assuming CAA's Federal Aid Airport Program practices, administrative policies, and regulations, and the Federal Aid Airport Act were satisfactorily revised, would you vote in favor of program continuation?

The answers from 34 states were Yes — from 3 No, a ratio of 11 to 1. However, the 3 states indicating they were not in favor of continuing the program, even though administration of the program was improved, qualified their answers by stating that projects which have been started should be completed.

> *Question* 2: Irrespective of such changes being made (Question 1) would you vote in favor of the continuation of the Federal Aid Airport Program; i.e., would you vote in support of the *principle* of Federal grants-in-aid for development of airport and air navigational facilities?

24 states answered Yes — 13 answered No. From these figures it is evident that one-third of the states are not in favor of continuing the program unless many of the costly and time-consuming policies, restrictions and red tape, under which the program is now administered, are eliminated.

> *Question* 3: Assuming that the Federal grants-in-aid program for airports and air navigational aids were to be wholly discontinued, would your state and its municipalities and political subdivisions be able to complete necessary airport development?

Only three states of the forty-five included in the survey indicated that the state or its political subdivisions would be able to complete needed airport development without Federal assistance. 34 answered No.

During the past 2 or 3 years, especially since the beginning of the Korean War, it has been the policy of the Federal Government to limit the inclusion of projects in the Federal Aid Airport Program to those considered essential to national defense, which in nearly all cases, meant that Federal aid was only available to large airline terminals. Therefore, Question 4 was worded as follows in order to determine the views of the various states as to whether Federal aid should now be limited to any particular class of airports.

> *Question* 4: If you would vote in favor of the principle of Federal grants-in-aid for development of airports and air naviga-

tional aids, would you favor restriction of its application to airports of a certain classification and larger? If answer is "Yes," indicate minimum class of airport. (Secondary, Feeder, Trunk, Express, Continental Express, Intercontinental Express.)

Only 3 states voted in favor of the principle of restricting Federal aid to certain types of airports. 2 of these states recommended that such aid be limited to Feeder type or larger airports and the third to those projects which were required for defense or where flying was determined to be predominantly interstate.

Briefly, the above survey indicates that the various state aviation agencies are overwhelmingly in favor of continuing the Federal Aid Airport Program provided policies and regulations are revised or eliminated which, during the past seven years, have been found to be unnecessarily costly and time-consuming.

One-third of the states do not favor a continuation of the program as it is presently administered. However, the officials of only 3 states are of the opinion that the state and its political subdivisions could effectively carry out the type of airport program considered necessary for the safety of flight and for the full development of the airplane as a means of both intra-state and interstate transportation.

The National Association of State Aviation Officials highly commends the present Administration and the various Federal agencies that are attempting to reduce Federal expenditures with a view of a reduction in Federal taxes. Taxes are, however, paid by the people living and doing business in all states and in all communities, and little, if anything, is gained by the Federal Government arbitrarily, and almost without notice, revising or eliminating programs which may save Federal expenditures on the one hand, but which on the other increases expenditures or results in financial losses at state and local levels.

It is a well known fact that in order to make money, particularly in a new enterprise, it is necessary to spend money. This policy was and is still being followed by Government in the support of highway and waterway transportation systems. These forms of transportation received substantial Federal assistance long before the vehicles and ships that made use of the facilities constructed were large in number. No one would question, I believe, the wisdom of the appropriations that have been made or the indirect aid provided by the Congress for the development of railroads, highways, and the docks, terminal facilities, harbors, and inland waterways that our land and water transportation systems now enjoy. Therefore, it would appear logical that a national system of airports, carefully planned to foster and develop the use of air vehicles as a means of transportation would be in the national interest and that the Federal Government should bear its proportionate and just share of the cost.

# JUDICIAL AND REGULATORY DECISIONS

## COVERAGE OF CROP-DUSTING EMPLOYEES UNDER THE FAIR LABOR STANDARDS ACT

AERIAL CROP-DUSTING has finally come of age. Today, as never before, many farmers have turned to this field of aviation as a solution to the problem of insect control. At least eight thousand planes are presently used in dusting crops, and the figures promise to grow even larger as the industry emerges from its infancy.[1]

In a recent case, *Tobin v. Wenatchee Air Service, Inc.*,[2] the Federal District court held that the service employees of a local crop-duster are covered by the Fair Labor Standards Act.[3] The case involved an employer who recorded a fixed number of hours worked per week for each of his employees regardless of how long they actually worked. Thus, even though an employee might work more than forty hours one week and less than forty hours the next week, his pay for both periods was the same.[4]

The *Wenatchee* case dealt with a firm on the very fringe of the coverage provisions of the Wage and Hour Laws. The trade involved was one close in nature to agriculture, an industry which is exempt from the FLSA. Also, the firm was a small business and one essentially local in nature. With these facts in mind, can we say that the *Wenatchee* case was correctly decided? Would Congress have ever intended a local duster to fall within the purview of the FLSA?

The criterion for inclusion under the FLSA is that an employee be engaged in the production of goods for Interstate Commerce.[5] The term *production* is not limited to direct productive activities, but is extended to include all activities performed by employees which are "in any *closely*

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[1] McSurley, *Growth of Agricultural Plane Use*, 51 AVI. WEEK 43 (Oct. 10, 1949). Statistics given are for 1949. Hasbrook, *What a Spray Plane Should Have*, 52 AVI. WEEK 25 (Feb. 13, 1950). "After World War II, better and less expensive insecticides became available as a result of accelerated war-research. This, plus the necessity of producing more and more food for ourselves and the rest of the world, further boosted the demand for aerial dusting, spraying, seeding."

Note, *Liability for Crop-dusting*, 17 J. AIR L. 364 (1950). (Deals with the question of liability for damages resulting from aerial crop-dusting.)

[2] Tobin v. Wenatchee Air Service Co., Inc., 1952 U.S. & C. Av. R. 249 (E.D. Wash., May 27, 1952). Strangely enough, the attorneys for the defendant corporation failed to submit a written brief.

[3] The court also held that the company had violated the hourly (forty hour week, time and one-half for overtime) and record keeping provisions of the Act. 52 STAT. 1063 (1938), 29 U.S.C. 207(a) (1946); 52 STAT. 1066 (1938), 29 U.S.C. 211(c) (1946).

[4] The employees of the company affected by the court's action were the bookkeeper, the mechanics, the parts man, and the lineman. The status of the pilots was not considered, probably because it was conceded that they might qualify for the agricultural exemption because they work on the farm (actually over the farm). See note 19 *infra*.

[5] The Act applies to employees (1) engaged in Commerce or (2) engaged in the production of goods for Commerce, if they have not otherwise been exempted. INTERP. BULL., *General Coverage of the Wage and Hour Provisions of the FLSA of* 1938, as amended, (May 1950).

The employees of the Wenatchee Air Service Company could not be engaged in Commerce, since all of the dusting activities of the firm are carried on in the State of Washington.

In every instance, coverage is determined by the activities of the individual employee. It is possible that part of the employees of a company may be subject to the Act, while other employees of the same company may not be covered or may be exempt. Davis v. Goodman Lumber Co., 133 F.2d 54 (4th Cir. 1943); Fleming v. Hawkeye Pearl Button Co., 113 F.2d 52 (8th Cir. 1940).

*related* process or occupation *directly essential* to the production" of goods for Commerce.[6] The Act provides many exemptions for specific trades and industries, the majority of these exemptions applying to small businesses and local enterprises.[7]

The court in the *Wenatchee* case found that the employees of the company were engaged in the production of goods for Commerce. The defendant contended that the sole connection his employees have with Commerce is servicing planes which spray crops that are eventually harvested and shipped through Interstate channels, and that this does not constitute a sufficiently close connection with Commerce to place these employees within the scope of the Act.

The defendant's position is that the FLSA Amendments of 1949 and their legislative history suggest that the service employees of a aerial crop-duster are not engaged in the production of goods for Commerce. These amendments had the effect of narrowing the coverage of the Act.[8] The word produced in the original law included workers engaged "in any process or occupation *necessary* to the production" of goods for Interstate Commerce. The law as amended narrowed the meaning of produced by substituting the words *closely related* and *directly essential* for the single term *necessary*.[9] Thus, under the new law, the employees of a local concern who perform activities too remote from production are to be removed from the purview of the Act.

However, the legislative history of the 1949 Amendments is not without confusion. True, the House Conference Report manifests a desire to narrow coverage, and even mentions the *McComb v. Super-A Fertilizer Works*[10] case

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[6] 52 STAT. 1061 (1938), 29 U.S.C. 203 (j) (1946), as amended, 63 STAT. 910 (1949), 29 U.S.C. 203 (j) (Supp. 1946).

[7] 52 STAT. 1067 (1938), 29 U.S.C. 213(a) (1946), as amended, 63 STAT. 917 (1949), 29 U.S.C. 213(a) (Supp. 1946).

[8] "The Fair Labor Standards Act Amendments of 1949 indicate an intention to restrict somewhat the category of employees within the reach of the Act . . . " Rule 776.1 INTERP. BULL., *General Coverage of the Wage and Hour Provisions of the FLSA of* 1938, as amended, (May 1950).

And Rule 776.2, *Id.*, states that under the new law, "an examination of the character of the employer's business will in some borderline situations be necessary in determining whether the employee's occupation bears the requisite close relationship to production for Commerce."

Immediately after the enactment of the 1949 Amendments, one writer took the position that the Act had been considerably reduced in coverage with the intent to cut down the broad interpretation that it had been given by the courts and by the Administrator. The writer concluded that, henceforth, "fringe" employees formerly held to be within the coverage of the Act would now be eliminated from the purview of the Act. Howlett, *Fair Labor Standards Act Amendments of* 1949, 29 MICH. S.B.J. 36 (April 1950).

But see the remarks of Congressman Lesinski of the House Conference Committee, 95 CONG. REC. 14942 (1949), that the Amendments do not radically change the "coverage of the Act as it has been interpreted by the Courts in the past."

And Smethurst & Halsam, *The Fair Labor Standards Act Amendments of* 1949, 18 GEO. WASH. L. REV. 137 (1949-50), where the authors indicate that there is likely to be little actual change in the interpretation of the law.

See also Tobin v. Pennington-Winter Construction Co., 198 F.2d 334 (10th Cir. 1952), where majority and dissent reach a different conclusion because the majority gave less emphasis than the dissent to the intention under the amended law to narrow coverage.

[9] Under the old definition of "produced," the courts always interpreted the term *necessary to production* very broadly, holding an employee covered if his occupation was found to be necessary to the production of an article for Commerce. The requirement was not that the employee's work be indispensable to production, but only that it was "needed in such production and would if omitted handicap such production." Roland Electric Co. v. Walling, 326 U.S. 664 (1946).

[10] 165 F2d. 824 (1st Cir. 1948). The House Conference Report on the 1949 Amendments, 95 CONG. REC. 14928 (1949), stated that henceforth a firm such as the Super-A Fertilizer Works should be excluded from the coverage of the Act "because the activities involved . . . are not closely related or directly essential to production."

as an example of a local fertilizer manufacturer to whom the new law should not apply. That case involved a local fertilizer manufacturer in Puerto Rico whose entire product was sold to local sugar growers. The sugar cane plants were eventually harvested, refined, and moved in Interstate Commerce. The District court had ruled that the employees of this fertilizer manufacturer were engaged in the production of goods for Commerce because their work was necessary to the production of sugar cane.

The attitude of Congress towards the *Super-A Fertilizer* case is significant because the position of a local fertilizer manufacturer is somewhat analogous to that of a local crop-duster. Both are agricultural service industries. Both produce an item for an industry which is itself exempt (agriculture), but the product of which flows in Interstate Commerce.

The House Conference Report goes on to state, however, that no major changes are being made in the law, and even lists specific categories of employees still subject to the Act. The two most important categories for our purposes being:

(1) "Employees . . . who make, repair, or maintain machinery or tools and dies used in the production of goods for Commerce."

(2) "Employees of public utilities furnishing . . . water to firms within the State engaged in . . . production for Commerce."[11]

Mention of these two categories in the House Conference Report would appear to evidence Congressional approval of the holdings in the *Roland Electric Company v. Walling*[12] and in the *Farmers Reservoir & Irrigation Company v. McComb*[13] cases. In the *Roland Electric* case, the mechanics of a local electrical firm that repaired motors for firms producing goods for Commerce, were themselves held to be engaged in the production of goods for Commerce. In the *Farmers Reservoir* case, the field employees of a non-profit cooperative irrigation company that provided water for Colorado farmers, were held to be engaged in the production of goods for Commerce.

Yet, in spite of the seeming inconsistencies, the House Conference Report makes clear that under the new law, "An employee will not be covered unless he is shown to have a closer and more direct relationship to the producing, manufacturing, etc., activity than was true,"[14] in a number of court decisions and administrative rulings.

The position of the government attorneys which the court in the *Wenatchee* case accepted was, "That the activities of defendant's employees

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[11] 95 CONG. REC. 14928 (1949).

[12] 326 U.S. 664 (1946). The motor repair employees of the Roland Electric Company were held to be engaged in the production of goods for Commerce because their work was found to be *necessary* to the production of producers of goods for Commerce. The court cited Kirschbaum v. Walling, 316 U.S. 517 (1942), to the effect that "the work of petitioner's employees has such a close and immediate tie with the process of production for Commerce, and was such an essential part of it, that the employees are to be regarded as engaged in an occupation *necessary* to the production of goods for Commerce." p. 665.

[13] 337 U.S. 755 (1949). Here, a group of Colorado farmers organized a non-profiit irrigation company to provide water for their crops. The crops were eventually harvested and moved in Interstate Commerce. The Supreme Court held that the field employees of the irrigation company were engaged in producing goods for Commerce because their work was *necessary* to the production of agricultural commodities. The court rejected the notion that the field employees were employed in agriculture, and, thus, exempt from the Act by reason of the agricultural exemption. In 1949, however, Congress amended the agricultural exemption provision to provide for the exemption of non-profit irrigation companies.

[14] 95 CONG. REC. 14928 (1949). No clear indication is given of where coverage under the Act should cease. But, seemingly, several limiting factors that bear heavily on the question of coverage are (1) employment by a local firm and (2) the doing of work that has but a "remote or tenuous" relation to production or to the operations of a producer of goods for Commerce.

Note, *Fair Labor Standards Amendments of* 1949, 34 MINN. L. REV. 675 (1949).

have at least as close a relationship to production as did those of the employees in the *Roland Electric Company* and *Farmers Reservoir* cases; . . ."[15] They argued, too, that the *Super-A Fertilizer* case has little applicability to the case of a crop-duster because Super-A's employees were more than one step removed from the production of agricultural commodities.[16]

If any logic can be made out of the legislative history of the 1949 Amendments, it would appear that the case of a crop-duster is more closely analogous to the case of a fertilizer company than to the cases of a motor repair firm or an irrigation company. These latter two firms perform services that are *directly essential* to the production of the producers of goods whom they service. Industrial producers cannot do without motors, nor can farmers in arid country do without water. By comparison, the work of a crop-duster or fertilizer company is only in furtherance of, but is not *directly essential* to the production of the producers of goods whom they service. Naturally, crop yield would be considerably reduced without the application of insecticide or fertilizer. Yet, neither are as *essential* to the growth of plant life as water. Nor are fertilizer or insecticide as *essential* as are motors in relation to industrial production.

Rule 776.19(b)(4) of the Interpretive Bulletin[17] promulgated by the Wage and Hours Administrator, also, appears capable of a construction that lends weight to the view that the employees of a duster were not meant to be within the scope of the FLSA. This Rule explains that Congress meant to withdraw from coverage, people such as fertilizer employees whose product is "assimilated by the soil" rather than by the plant because what they do is "considered less directly essential to the production of farm products" than what is done by employees whose product enters directly into the plant. But, water, seed, and feed employees who are engaged in the production of commodities which "enter directly into the very product that moves in Commerce and are *indispensable* to its production . . . and without which such production would not be possible" are to remain covered by the Act. Employing this rule as a frame of reference, it is clear that insecticides are not "assimilated directly into the plant." Rather, the employees of a crop-duster seem to fit into the category of "assimilation by the soil" because their work product is not *indispensable* to the production of agricultural commodities. Hence, the conclusion follows that a local aerial crop-duster was not meant to be subject to the Wage and Hour Laws.

Quite apart from the significance of the term production and the degree to which an employee must be engaged in production for Commerce to be covered by the Act, Congress has provided a number of specific exemptions from the FLSA. The majority of these exemptions exist for the benefit of small businesses and local enterprises. One such provision excludes agricultural labor from the scope of the Act. Similar provisions apply with respect to certain types of retailers, laundry and cleaning establishments, fishermen,

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[15] Brief for the government, p. 8, Tobin v. Wenatchee Air Service Co., Inc., 1952 U.S. & C. Av. R. 249 (E.D. Wash., May 27, 1952).

[16] The argument of the attorney's for the government runs as follows: The crop-duster's pilot is engaged in producing crops in the same way that a ground crew applying insecticides is so engaged. Then, obviously, the bookkeeper, machanic, and the other service help of the company are only one step removed from production. The House Conference Report on the 1949 Amendments specifically mentioned that coverage would continue to exist for employees, "who make, repair, or maintain machinery or tools . . . used in the production of goods for Commerce." This pronouncement should be taken as Congressional approval of the decision in the *Roland Electric* case, which likewise involved employees who were one step removed from production and who were engaged in repairing or servicing machinery. The *Roland Electric* case, is, therefore, a binding precedent in the *Wenatchee* case.

[17] INTERP. BULL., *General Coverage of the Wage and Hour Provisions of the FLSA of* 1938, as amended, (May 1950), p. 35.

small newspapers, and other miscellaneous categories of trades, professions, and industries.[18]

The defendant corporation in the *Wenatchee* case advanced the additional argument that even if their employees were held to be engaged in production as contemplated by the Act, then the firm should have been granted an agricultural exemption. On the face of the statutory language defining agriculture, however, there is little basis for contending that the service employees of a crop-duster were employed in agriculture. They were not employed by a farmer; nor did they do the ordinary type of work "performed by a farmer or *on a farm* . . ."[19] Legislative history indicates, too, that the agricultural exemption was not ordinarily meant to apply to activities organized on a separate economic basis from farming, which if performed by the farmer himself would be exempt.[20] Another factor negating the idea that Wenatchee's employees were employed in agriculture, is the policy consideration that a remedial statute such as the FLSA should be given the widest possible application,[21] but exceptions should be strictly construed.[22]

Yet, there, is a logical contradiction in the court's reasoning that a crop-duster is not entitled to an agricultural exemption. To reach the conclusion that Wenatchee's employees are covered by the Wage and Hour Laws, the court must hold that they are engaged in the production of agricultural commodities for Interstate Commerce. But, if these workers are engaged

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[18] See note 7 *supra*. The usual reason given for exempting an industry is that it is local in nature, and best left to State regulation. It is evident, however, that certain industries, notably agriculture, have been exempted for the additional reason that they possess a lot of political backing. Thus, to obtain support for the passage of the FLSA from the farm bloc, those Congressmen desiring to obtain the benefits of the Act for industrial workers, had to agree to exempt agricultural labor. In this connection, one writer has argued that through the method of political compromise, the farm bloc has almost consistently been able to exclude farm labor from the benefits of social legislation. Comment, ***Legislation and Agricultural Labor***, 1949 WIS. L. REV. 563; Forsythe, ***Legislative History of the FLSA***, 6 LAW & CONTEMP. PROB. 464 (1939).

The case reports state that Congress exempted agricultural labor because it is not subject to sweat shop working conditions. Also, that this type of labor is difficult to regulate because a substantial part of an agricultural workers' income must of necessity be for room and board. Bowie v. Gonzalez, 117 F.2d 11 (1st Cir. 1941); Jordan v. Stark Bros. Nurseries & Orch. Co., 45 F. Supp. 769 (D.C. Ark. 1942).

[19] 52 STAT. 1060 (1938), 29 U.S.C. 203(f) (1946). "Agriculture" includes farming in all its branches and . . . includes the cultivation and tillage of the soil, dairying, the *production*, cultivation, growing, and harvesting of any agricultural or horticultural commodities . . . , the raising of livestock, fur-bearing animals, or poultry, *and any practices . . . performed by a farmer or on a farm* as an incident to or in conjunction with such farming operations . . . "

But is it not probable that the pilot operating the spray plane would be found to be exempt from the Act because he is engaged in work *on the farm* (actually, over the farm), and is, therefore, employed in agriculture.

[20] Farmers Reservoir & Irrigation Co. v. McComb, 337 U.S. 755 (1949). p. 761.

Note, too, that a farmer could dust his crops with a tractor attachment, and this activity would then be exempt because performed by a farmer.

[21] Farmers Reservoir & Irrigation Co. v. McComb, 337 U.S. 755 (1949); Tenn. Coal, Iron & R. Co. v. Muscoda Local No. 123, 321 U.S. 590 (1944); Coomer v. Durham, 93 F. Supp. 526 (W.D. Va. 1950); Edwards v. Riverside Products Co., 85 F. Supp. 290 (N.D. W. Va. 1949).

[22] Phillips v. Walling, 324 U.S. 490 (1945); Miller Hatcheries, Inc. v. Boyer, 131 F.2d 283 (8th Cir. 1942); Bowie v. Gonzalez 117 F.2d 11 (1st Cir. 1941); Walling v. Home Loose Leaf Tobacco Warehouse Co., Inc., 51 F. Supp. 914 (E.D. Ky. 1943). But see Damutz v. Pinchbeck, 158 F.2d 882 (2d. Cir. 1946), where a greenhouse employee who fired the boilers in a greenhouse was held to be employed in agriculture, and where the court said that "although this exemption provision in a remedial statute should be strictly construed, it should of course be given due effect . . . which shows the intent of Congress to make the term agriculture cover more than what might be termed ordinary farming activities."

in the production of agricultural commodities, then why are they not considered to be employed in farming, and thus exempt from the Act. This is in substance the position that Mr. Justice Jackson took in his dissenting opinion in the *Farmers Reservoir & Irrigation Company v. McComb*[23] case, where a similar problem with reference to the agricultural exemption was raised. The majority answered Justice Jackson by saying that *production* was used in a special sense in sec. 203(j) in defining the word "produced," and is used in another sense in sec. 203(f) in defining "agriculture."[24] However, this explanation is not completely satisfying; nor is the explanation convincing that the reason for the use of the word *production* in the definition of agriculture was to obtain an exemption for those engaged in tapping trees for turpentine and rosin.[25] Even accepting the merit in the court's argument, it still seems that if one is engaged in agricultural production, then he is employed in agriculture.

The preceeding discussion should make obvious the difficulty of attempting to proceed logically in a field of the law where there is a great deal of confusion. In truth, the legislative history of the 1949 Amendments is both confusing and contradictory, and it is doubtful if the conflicting cases that bear on this subject can be rationally reconciled or distinguished. Nor is Interpretive Rule 776.19(b)(4) a useful criterion for coverage, when applied to the case of a crop-duster. One may rationalize in either direction and conclude that the *Wenatchee* case was decided rightly or wrongly, but such efforts at rationalization are futile. In this case, it was the FLSA Administrator who brought enforcement proceedings against the company. Can it be said that the FLSA Administrator exhibited that degree of flexibility necessary to wise administration when he decided to institute these proceedings against the Wenatchee Air Service Company?

There are many reasons why Wenatchee should not be within the coverage of the FLSA. For one, the firm is local in nature and fairly remote from production for Commerce. Then, too, all the economic, natural, and meteorological factors which underly the agricultural exemption, exist in the case of a farm service industry organized on a local basis such as this crop-duster. Both farmers and crop-duster are strongly influenced by local conditions, the changes of season, the variations of weather, and the need for long working hours at peak seasons of the year. Lastly, Wenatchee is a small business, and as such, should be considered for special and more lenient treatment. Many of the present statutory exemptions exist for the benefit of small business, and it is, therefore, not unreasonable to assume that Congress would have intended the enforcement of the FLSA to be

[23] 337 U.S. 755 (1949). See Jackson's dissent at p. 770. The definition of agriculture contains within it the word production (see note 19 *supra.*). Now, if *production* as used in the definition of agriculture (§203 (f) is to be given the same weight or meaning as *production* as used in the definition of produced (§203 (j), then, it is argued that the agricultural exemption should include all occupations and processes that are closely connected with agriculture and whose only connection with Commerce is through farming. Thus, if the employees of a crop-duster are held to be doing work that is closely related or directly essential to agricultural production, as is contended by the government, then they should be exempt from coverage. See Farmers Reservoir & Irrigation Co. v. McComb, *Id.*, p. 764, where a similar argument was advanced by the defendant corporation and was rejected by the court.

[24] Farmers Reservoir & Irrigation Co. v. McComb, *Id.*, p. 764. The court argued that an exemption does not carry with it all occupations whose only connection with Interstate Commerce is through the exempted occupation; Also, that an exemption should not be granted merely because a firm's only connection with Commerce is through an enterprise itself exempt.

[25] Farmers Reservoir & Irrigation Co. v. McComb, *Id.*, p. 765. But the court also pointed out that if *production* as used in §203 (f) were meant in the same sense as *production* as used in §203 (j), then it would make surplusage of the rest of the words in the clause defining agriculture in which the word production is included, to wit: "cultivation," "Tillage," "growing" and "harvesting." p. 764.

less strict and more flexible, with respect to small business. It is more than probable that the social advantages that coverage would obtain for the employees of a firm of this size would less than outweigh the social burden that the Act would place on this company.

It cannot be said that the Statutory definition of the word *produced* precluded the District court from finding that Wenatchee's employees were engaged in the production of goods for Commerce. But such a finding does not seem in keeping with the spirit and objectives of the Wage and Hour Laws. The solution to the problems raised by the *Wenatchee* case may lie in the administration of the Wage and Hour Laws.[26] Why did not the Administrator use his discretion and leave this firm alone when he saw that this was a borderline case involving a small business local in nature and closely allied to agriculture? The way to avoid absurd borderline cases is to refrain from instituting proceedings in the first instance. Merely through a great use of his discretionary powers, the Administrator can do much to improve the administration of the FLSA.

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## FEDERAL CONTROL OF LAND TO PROTECT AIRPORT APPROACHES

DURING the past year tragic air crashes in crowded residential areas surrounding airports have resulted in a re-examination of the effectiveness of the protection accorded both aircraft and neighboring residents by government regulation of the use of land in the airport area. Prompted in part by the investigations and recommendations of a group of presidentially appointed experts—the Doolittle Commission*—a bill was introduced in the last session of Congress designed to expand federal control over building heights and the nature of land use around airports. Senate Bill 3129[1] would

[26] The results of the 1952 National Election could conceivably have a great deal of effect on the manner in which the FLSA will be administered for the next four years. The Republican Party Platform opposes any extensions of government control, and criticizes the present day regulatory laws as hardly permitting "a phase of our economic and social life today in which government does not attempt to interfere." See Text of the Republican Party's 1952 Campaign Platform Adopted by the National Convention. New York Times, Friday, July 11, 1952.

The likelihood, therefore, is that the near future will not see any extensions in the coverage of the FLSA. If, anything, coverage might possibly be reduced, particularly with respect to borderline cases such as a crop-duster.

* A summary report of the Doolittle Commission. Sec. 19 J. Air L. & C. 221.

[1] S. 3129, 82d Cong., 2d Sess. (1952). A bill to authorize the Secretary of Commerce to remove obstructions or hazards to air navigation, to prevent future obstructions or hazards to air navigation, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That this Act may be cited as the "Civil Aeronautics Act of 1952."

*Sec.* 2. Section 1 of the Civil Aeronautics Act of 1938, as amended, is amended by adding the following definitions: "(33) 'Secretary' means Secretary of Commerce. (34) 'Structure' means any object constructed or installed, including, but not limited to, buildings, towers, smokestacks, and overhead transmission lines."

*Sec.* 3. The Civil Aeronautics Act of 1938, as amended, is further amended by adding thereto a new title XIV, as follows:

"TITLE XIV — REGULATION OF GROUND HAZARDS TO AIR NAVIGATION

"*Sec.* 1301. *Findings and Declarations of Policy.* (a) It is hereby declared to be essential to (1) the proper exercise of national sovereignty, (2) the development and regulation of commerce, (3) the development and protection of military aeronautics, (4) the exercise of the power to provide for the common defense, and (5) the protection of the value of the investment of funds of the United States in landing areas and other air-navigation facilities, that there be carried out a program of regulating the height, type, and location of struc-

grant to the Secretary of Commerce power to regulate the height, type of construction, and nature of occupancy of future structure in the vicinity of practically all the airports in the country. In addition, the Secretary would be empowered to purchase, lease, or condemn existing structures and acquire, in a similar manner, such easements and other property interests as would

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tures and objects of natural growth in the vicinity of landing areas where the safety or freedom of aerial navigation may otherwise be impaired. Such program shall be developed and carried out with consideration for (1) the achievement of maximum usefulness of landing areas consistent with their physical characteristics, the surrounding terrain, and the type of aircraft operation for which the landing area was designed or is used; (2) the interests of safety through the establishment of standards for the height, type, and location of structures and objects of natural growth in the vicinity of landing areas as uniform as possible considering the physical characteristics of the landing area, the surrounding terrain and the use made thereof, and the type of aircraft operation for which the landing area was designed or is used; (3) the necessity for the utmost freedom in the mobilization and tactical employment of military aircraft at any time for the defense of the United States; (4) the comparative ecomonic effects of regulating the height, type, and location of structures and objects of natural growth in the vicinity of landing areas sufficiently to achieve the foregoing objectives or relocating such landing areas. (b) In order to achieve the foregoing objectives, the Secretary shall enlist the cooperation of the States and the political subdivisions in its execution and shall take necessary action to insure safe and uniform conditions.

"*Sec.* 1302. The United States of America heretofore has declared by law its possession and exclusive national sovereignty in the airspace above the United States, its Territories and possessions. In furtherance of this declaration, all such airspace which is five hundred feet or more above the surface of the subjacent land and which is unoccupied on the effective date of this title or which hereafter becomes unoccupied and remains unoccupied for a period of seven years, is declared to be an easement for the purpose of aerial navigation and its occupancy shall be subject to regulation and control for the furtherance of that purpose.

"*Sec.* 1303. *Establishment of Standards.* The Secretary is authorized after consultation with the Secretary of Defense and the Civil Aeronautics Board, to establish standards for determining under what conditions structures and objects of natural growth are or would become physical obstructions or hazards to air navigation, giving consideration to — (1) topography; (2) type of urban or industrial development; (3) flight characteristics of aircraft using or which may reasonably be expected to use the airspace; (4) type and amount of air traffic; (5) regulations governing the operation of aircraft; and (6) size and nature of landing areas.

Revision of such standards shall be maintained at all times in accordance with actual or anticipated technological development of military and civil aeronautics.

"*Sec.* 1304. All Federal agencies constructing or altering, or authorizing the construction or alteration of, any structure, or furnishing financial assistance in connection therewith, shall adhere to the standards established and regulations issued by the Secretary, or require adherence thereto.

"*Sec.* 1305. No application of the standards established under §1303 shall be made by regulation or acquisition as hereinafter provided unless the areas within which they are so applied either (1) underlie the paths of flight through the navigable airspace where substantial air traffic exists or is reasonably anticipated, or (2) are in the vicinity of (a) landing areas owned, leased, or substantially used by the Federal Government, (b) landing areas used or authorized for use by air carriers, or (c) landing areas which in the opinion of the Secretary are essential for use by aircraft engaged in air commerce.

"*Sec.* 1306. *Regulations.* (a) With respect to all areas in which the Secretary is authorized by §1305 to apply the standards established pursuant to §1303, the Secretary shall promulgate regulations limiting the height, type of construction, and nature of occupancy to which future structures or objects of natural growth may be extended or built into the airspace. No such regulations shall be issued unless the Secretary shall have determined that it is necessary and reasonable as applied to the area to which it relates. All regulations and notices issued hereunder required to be published in the Federal Register by the Administrative Procedure Act shall also be published in one local newspaper of general circulation in each county or other appropriate political subdivision of the State in the area where the regulations are to apply.

"(b) Any person believing that a regulation issued hereunder unreasonably interferes with the use and enjoyment of his property to the extent that it con-

be necessary to remove or prevent hazards to navigation. This paper will explore the constitutionality—as well as necessity and wisdom—of these proposed ventures by the Federal Government.

## THE SCOPE OF FEDERAL POWER

Federal control of the activities of airports and their neighbors may be defended as a exercise of the commerce, war, or postal powers. The proposed legislation recites the first two in justification of its provisions. Since

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stitutes a taking without just compensation, contrary to the Fifth Amendment to the Constitution, may file a request for relief with the Secretary: *Provided*, That all claims for relief hereunder shall be barred if not presented to the Secretary within one year after the date of publication of such regulation. The Secretary shall determine, after notice and opportunity for hearing, whether any taking has occurred, and whenever the Secretary shall find that a taking has occurred, he shall by order either: (1) fix the amount found due as compensation for such taking, or (2) grant such relief by exception to the regulations, or otherwise, as he may deem necessary. The Secretary shall promptly certify to Congress a statement of the amounts he has found due under this section, together with copies of the pertinent orders.

"*Sec.* 1307. *Permits.* Any person who desires to construct or alter any structure or to allow any object of natural growth to grow into the airspace above five hundred feet, contrary to any rule, regulation, or order issued under §1306 (a), may apply to the Secretary for a permit therefore. If, after notice and opportunity for hearing, the Secretary finds that such action is necessary in the public interest and is not inconsistent with the policies and purposes of this title, he shall issue a permit, subject to such terms, conditions, and limitations as he may consider desirable in the public interest. Such permit shall not be revoked, except after notice and opportunity for hearing and then only for violation of the terms, conditions and limitations thereof, unless compensation is granted, in the manner provided in §1306 (b), for any loss caused by such revocation.

"*Sec.* 1308. *Acquisition of Property Rights.* With respect to all areas in which the Secretary is authorized by §1305 to apply the standards established pursuant to §1303, the Secretary is authorized, within the limits of available appropriations, to acquire by purchase, lease, or condemenation, such easements or other interests in airspace or other interests in property as he may determine to be necessary to— (1) remove, relocate, or alter an existing structure or object of natural growth so that it will no longer constitute an obstruction or hazard to air navigation; (2) prevent the construction, alteration, or growth of any structure or object of natural growth in such a way that it would constitute an obstruction or hazard to air navigation; or (3) permit the identification by appropriate means of existing structures and objects of natural growth which constitute obstructions.

The Secretary shall not exercise the authority contained in subdivision (2) hereof except to the extent he cannot accomplish the policies and purposes of this title by regulations authorized by §1306 (a). In the exercise of the authority granted herein, the Secretary may utilize the authority contained in §302 (c): *Provided*, That in condemnation proceedings conducted pursuant to the authority granted under the Act of February 26, 1941 (40 U.S.C. 257 et seq.), a plan of the land taken need not be contained in or annexed to the declaration of taking if the property rights taken thereunder consist of rights in airspace only.

"*Sec.* 1309. *Removal of Obstructions.* The Secretary is authorized to order the removal or alteration of any structure or object of natural growth extending into the airspace either (1) above five hundred feet without permit therefor duly issued by the Secretary, or (2) contrary to any regulation issued by the Secretary pursuant to §1306 (a). In the event that such order is not complied with within a reasonable time, the Secretary is authorized to enter upon the property and to remove or alter such structure or object of natural growth as may be necessary to effect conformance with the requirements of this title. The cost involved in such removal or alteration shall be a lien against the property upon which the structure or object of natural growth is or was situated, which lien may be foreclosed in the manner otherwise provided by law.

"*Sec.* 1310. *Notices of Construction.* Where necessary, the Secretary is authorized, by rule or regulation, to require all persons to give adequate notice in the form and manner prescribed by him of the proposed construction or alteration of any structure within any area in which the Secretary is authorized by §1305 to apply the standards established under §1303.

"*Sec.* 1311. *Procedure and Judicial Review.* The proceedings conducted by

the commerce power in peace time is at least as broad as the other two in matters involving commercial air transportation, the discussion here will be confined largely to a consideration of the limitations of the commerce clause.[2]

The Civil Aeronautics Act of 1938 has given to the Civil Aeronautics Board the power to prescribe rules of flight for aircraft.[3] Acting under this authorization, the CAB has promulgated flight regulations and traffic patterns for airports wherever this has been found necessary to the safety of air commerce.[4] The power of the Federal Government to control flight procedure in this manner is undisputed, at least where interstate flights are involved.[5] But what happens, *e.g.*, if the factory adjoining the airport erects a smokestack so tall that it is impossible to observe the approach procedure which has been found necessary and prescribed for the safety of the aircraft? This problem has become more and more acute as the increase in the speed of planes and the proportionate reduction in their manueverability have necessitated a longer, shallower landing approach to airport runways.

Clearly if the safety regulations of the CAB are to be effective, there must be, from some source, control of the height of structures in airport areas. There appears to be adequate power in the Federal Government to regulate the height of present and future structures about airports through zoning and eminent domain. A more difficult problem will arise, however, if the government attempts to prescribe also the *nature of the occupancy* of adjacent land and the *use* to which it could be put.

## Control of the Height of Structures

### *Eminent Domain*

The power of the Federal Government to condemn or appropriate existing structures presents no constitutional questions of any novelty or substance. The grants of plenary authority under the commerce, war, and postal clauses empower Congress to acquire property within the states and to construct, maintain, and operate instrumentalities in furtherance of the powers

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the Secretary under §1306, 1307, and 1309 of this title, the judicial review of rules, regulations, and orders issued as a result thereof, and the judicial enforcement of such rules, regulations and orders shall be governed by the applicable provisions of title X of this Act."

*Sec.* 4. Section 901 (a) of the Civil Aeronautics Act of 1938, as amended, is amended to read as follows: (a) Any person who violates (1) any provision of Title V, VI, VII, XII, XIII and XIV of this Act, or any rule, regulation, or order issued thereunder, or any provision of subsection (a) (1) of §11 of the Air Commerce Act of 1926, as amended, or (2) any rule or regulation issued by the Postmaster General under this Act, shall be subject to a civil penalty of not to exceed $1,000 for each such violation. Any such penalty may be compromised by the Board, the Secretary or the Postmaster General, as the case may be. The amount of such penalty, when finally determined, or the amount agreed upon in compromise, may be deducted from any sums owing by the United States to the person charged. If such violation is a continuing one, each day of such violation shall constitute a separate offense.

*Sec.* 5. Sections 902 (c) and 1101 of the Civil Aeronautics Act of 1938, as amended, and §11 (e) of the Air Commerce Act of 1926, as amended, are repealed.

*Sec.* 6. There are hereby authorized to be appropriated such sums as may be required to carry out the purposes of this Act.

[2] The Congress shall have Power . . . To regulate Commerce among the several States. U.S. Const. Art. I. §8.

[3] 49 U.S.C. §401 *et seq.* (1946).

[4] See *e.g.*, C.A.A. Technical Standards Order N-18, April 26, 1950, prescribing ideal flight patterns and airport approaches.

[5] There is some dispute whether federal law controls purely intra-state flights and airports handling only such traffic. See Northwest Airlines v. Minnsota, 322 U.S. 292 (1944); Rosenhan v. United States, 131 F.2d 932 (10th Cir. 1942). But see Parker v. James Granger Inc., 4 Cal.2d 668, 52 P.2d. 266 (1935).

bestowed. This power has been utilized already to acquire land rights in Virginia necessary to the construction of the completed Washington National Airport and the secondary Washington airport that was to have been constructed near Burke, Virginia. Dealing with the question whether the acquisition of the land for the Burke airport was a valid exercise of federal power, the United States District Court for the District of Columbia declared that ". . . when it is clear that the use for which it is sought to condemn property by eminent domain is a public one, there is no substantial question . . . as to the constitutionality of the statute."[6] Construction of an airport was held to be such a use.

The condemnation of property is not likely to lose its character as an acquisition for public use merely because the property is adjacent to, rather than within, the borders of the airport. The power to make and keep the airport usable is a necessary concomitant of the power to acquire and construct it. The Administrator of Civil Aeronautics does in fact hold and has exercised the power of eminent domain to acquire ". . . easements through or other interests in airspace immediately adjacent [to air navigation facilities] and needed in connection therewith."[7] This power is limited, however, to facilities owned by the United States and operated by the Administrator.[8]

Although the power of eminent domain is as broad as any of the expressed powers of the Federal Government which it complements, it is subject to the practical infirmity of the requirement of compensation for the landowner whose property is acquired.[9] Whenever a "taking" of property is involved, the duty to compensate arises, and the use of eminent domain involves by nature a taking rather than a mere regulation of the use of property. It is this practical difficulty which forces the Government to adopt instead the use of regulatory measures which are less likely to be regarded as a "taking" of property.

### *By Zoning*

Although the use of the zoning power is customarily associated with the activity of state governments, it seems clear that a counterpart of the state's power to zone exists in the Federal Government. It exists not as an inherent power but rather is collateral to the general powers of the United States. Whatever the limits of national power may be, it is certain that the express grants of authority to Congress in the commerce and other clauses cannot be frustrated by an inability to implement them with appropriate regulations. That these regulations occasionally penetrate an area of state interest does not necessarily render them void. ". . . When the United States exerts any of the powers conferred upon it by the Constitution, no valid objection can be based upon the fact that such exercise may be attended by the same incidents which attend the exercise by a State of its police power. . . ."[10]

The use of the federal "police power" to zone was upheld in 1919 in *McKinley v. United States*.[11] There the Secretary of War had been authorized to zone the areas around army camps to prohibit prostitution. The Supreme Court found such a scheme to be a reasonable measure for the protection of the armed forces which Congress had the duty and authority to raise and support under the war power. It was necessary for Congress to reach into

[6] Jasper v. Sawyer, 100 F. Supp. 421, 423 (D.D.C. 1951).

[7] 49 U.S.C. §302 (c) (2) (1946).

[8] There are but three such airports — the two mentioned in Virginia and a third in Alaska.

[9] U.S. CONST. AMEND. V; Luxton v. North River Bridge Co., 153 U.S. 525 (1894).

[10] Hamilton v. Kentucky Distilleries, 251 U.S. 146, 156 (1919).

[11] 249 U.S. 397 (1919).

an area generally subject to state authority alone in order to insure the protection of a federally created instrumentality.

It is not the source of the threat to commerce, the armed forces, or the postal service that determines congressional power. The threat itself creates the authority to provide for its removal in a reasonable manner. Once Congress has reasonably determined that the removal of high structures adjacent to airports is necessary to the safety of air commerce, it may adopt means appropriate to attain the end, even if the measures employed involve an interferenc with the rights of landowners under state law.

A situation strikingly similar to the airport problem is often presented in the course of the improvement of navigable streams and bays, when it becomes necessary to remove or prevent the construction of objects which hinder free passage in the channels of water traffic. In *Ashwander v. TVA*[12] the Supreme Court gave broad scope to the federal power in this regard when it stated that ". . . The power to regulate interstate commerce embraces the power to keep the navigable rivers of the United States free from obstruction to navigation and to remove such obstructions when they exist." While the highways of air traffic are less perceptible than the channels of a navigable stream, they are no less real and are certainly a good deal more dangerous if obstructed. In some cases, it is true, the path of air traffic may be more easily rearranged than the channel of a river by moving the runways or even the entire airport. This would be a factor to be taken into account in assessing the reasonableness of the zoning regulations. It would not of itself prohibit them. In many cases the cost of removing an entire airport may present a practical impossibility. This seems particularly true in metropolitan areas where the present danger from obstructions existing and threatened is the greatest.

The postal power is a third source upon which to base federal control of building heights around airports. Congress may take whatever action is reasonably necessary to protect the post roads it has established. Under the federal acts, the established air routes have been designated as post roads.[13] Since airport obstructions pose a direct threat to the safety of the mails, Congress should be considered capable of removing the threat in an appropriate manner.

No constitutional bar exists then to a federal system of zoning laws which would regulate the height of structures and natural growth in the areas adjacent to airports. Such a scheme should effectively protect air traffic. But, as noted in the beginning, a good part of the criticism of our present facilities has sprung from what is believed to be a menace to the lives of the persons on the ground, the neighbors of the airport, who face the risk of falling planes. The proposed legislation intends to alleviate this menace by granting the Secretary of Commerce the power to regulate the nature of the occupancy of any future structures in the area. By this means the areas in which the danger existed could be prevented from developing into residential or other populous districts. The wisdom and constitutionality of this proposal bears some consideration.

## Federal Power to Zone Land Use

As noted, the constitutional basis offered for federal zoning laws limiting the height of structures in areas adjacent to the nation's airports is the protection of air commerce, the flow of which, being subject to direct regulation, must be aided also by indirect regulation where this is necessary to maintain the effectiveness of the original laws. The very statement of this rationale exposes the problem presented where the objective is not to zone

[12] 297 U.S. 288, 328 (1936).
[13] 39 U.S.C. §481 (1946).

against unreasonable height, but to zone against the development of the adjacent land into a residential neighborhood with crowded school and other public buildings.[14] The Federal Government ostensibly has no direct interest in the health and safety of the citizens of a state. Its sole authority is to protect the flow of commerce, and it is difficult to discern any threat to air commerce from residential or any other use of land which does not intrude upon the navigable airspace.

The idea of federal regulation of land use for the protection of the users is novel enough that precedent is apparently non-existent and opinions by writers nearly so. The legal advisers of the Doolittle Commission, however, have offered as a possible basis for such regulation the theory that, if the adjacent lands are allowed to develop into a residential area, the owners may be able to enjoin the operation of the airport as a nuisance because of its noise, dust, glaring lights, and danger to its neighbors.[15] This would put the airport out of business and inflict a direct injury upon commerce. This approach would tie the proposed regulation to a recognized power of Congress.

Whether even the authors of this theory give it much credence is questionable, however. In an earlier part of the same article in which it is proposed, they have noted the situations in which courts have, in the past, granted injunctions against airport operations as constituting a nuisance.[16] Two cases were cited, the latest in 1932, which granted a total injunction against airport operations. Others were noted which curtailed operations in varying degrees or which refused any injunction. The authors stated: "Many recent cases refuse to issue any injunction at all on facts where earlier decisions would surely have done so."[17] It does not seem likely that the operation of a metropolitan airport could today be enjoined by neighboring residents except in the most extreme of circumstances, and the possibility of the injunction, therefore, scarcely seems such a threat to commerce as would justify federal interference with the land law of the states.[18]

The proponents of the theory of the threat to commerce from the injunction have suggested, as an additional source of support, the cases which impose upon riparian owners a "servitude" in the Federal Government for purposes of regulation. They have cited only a secondary source[19] to which they direct the reader for an identification and discussion of the cases. This source, however, was concerned with the question of zoning against heights and of compensation, and did not consider the possibility of the federal zoning of land use. Nor do the river cases themselves seem properly analogous. They do not deal with the use of land for purposes of protecting its owner from the hazards of commerce, but protecting commerce from threats of obstruction by riparian owners.[20] Furthermore, most of them are concerned

[14] The problem of community encroachment upon areas adjacent to airports is particularly pressing in fast growing communities such as Los Angeles. REPORT OF THE PRESIDENT'S AIRPORT COMMISSION, THE AIRPORT AND ITS NEIGHBORS 6 (1952).

[15] Pogue and Bell, *The Legal Framework of Airport Operations*, 19 J. AIR L. 253 (1952).

[16] *Id.* at 259.

[17] *Ibid.*

[18] Though the possibility of the injunction seems too remote, the danger that public furor may cause the suspension of airport operations as it did in Newark is certainly a threat to commerce. Whether it is a factor of which a court would take cognizance, however, is very doubtful. It is interesting to note that the spectacular and tragic Newark crashes were due solely to mechanical failures in the aircraft and were in no way caused by inadequacies in airport facilities or approaches.

[19] Memorandum by Mr. Howard Westwood, *Hearings, House Committee on Interstate and Foreign Commerce, on H.R.* 1012, 78th Cong. 1st Sess. 249 (1943).

[20] Ashwander v. TVA, *supra* note 10; Luxton v. North River Bridge Co., *supra* note 7.

solely with the problem of compensation to the owner for an alleged taking.[21]

Even apart from the constitutionality of the proposal, it seems difficult to justify the regulation of the use of the property of a man who poses no threat to any one and who chooses freely to accept whatever risk is involved in living near an airport. The application of the commerce power to deny a citizen the use of his land for residential purposes, for example, is a rather startling proposition. In addition, the problems it raises in terms of compensation may render the whole plan impractical.

## THE MATTER OF COMPENSATION

The Doolittle Report recommended that the responsibility for zoning be left to the states for the present.[22] An important consideration underlying this decision was the fear that the extensive regulation required to render many airports safe would often result in such a diminution in value of the affected property as to result in a compensable "taking" under the Fifth Amendment.[23] The financial outlay required might well be prohibitive.

The problem of what sort of governmental intrusion will constitute a compensable taking has never been clearly delineated. In *Pennsylvania Coal Co. v. Mahon*[24] Mr. Justice Holmes said that the power of a state to appropriate property ". . . must have its limits, or the contract and the due process clauses are gone. One fact for consideration . . . is the extent of the diminution. When it reaches a certain magnitude, in most if not all cases there must be an exercise of eminent domain and compensation to sustain the act. So the question depends upon the particular facts. . . ."[25] Since the determination must be largely an *ad hoc* judgment by a court, there is great difficulty in predicting the cost of any project, and a regulatory scheme which must be planned on a limited budget becomes something of a gamble.

There are, however, two general criteria which have been judicially developed to test the presence or absence of a "taking." The first, as noted by Mr. Justice Holmes, is the extent of the reduction in value of the property.[26] This seems to mean the relative devaluation of the property rather than the absolute amount of the loss. This factor is set in the balance against the weight of the public interest involved. The second factor, at least as important, is whether the regulation has a retroactive or only a prospective effect.[27] Where established structures are involved, the likelihood of a taking being found is much greater than where only future use of the land is curtailed.

In *United States v. Causby*[28] a chicken farmer recovered compensation for an implied easement in the usable airspace above his farm which was "taken" by the repeated flights of military aircraft into and out of the adjoining air field. The decision depended to some extent upon the fact that the Civil Aeronautics Authority had not included any of the navigable airspace under 500 feet "in the public domain." But the opinion was more concerned with the thought that a private business had suffered a substantial reduction in value by the acts of the government. However, since the proposed regulation would affect only the future use of property, it is not so clear that any taking would be found, unless the height restrictions were so

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[21] Monongahela Navigation Co. v. United States, 148 U.S. 312 (1893); Union Bridge Co. v. United States, 204 U.S. 364 (1907).

[22] REPORT OF THE PRESIDENT'S AIRPORT COMMISSION, *op. cit. supra* note 14, at 9.

[23] *Id.* at 74.

[24] 260 U.S. 393 (1922).

[25] *Id.* at 413.

[26] But see Hadacheck v. Sebastian, 239 U.S. 394 (1915).

[27] Dutton v. Mendocino County, 1949 U.S. Av.R. 1 (1949) and cases cited therein. See also Pogue and Bell, *supra* note 15, at 263.

[28] 328 U.S. 294 (1946).

low as to render the land useless for most purposes. The possibility of compensation being required will, of course, be greatest in the land nearest the end of the landing strips where the building heights would be most restricted.

Whatever comfort landowners might experience from the *Causby* case may well be chilled by such decisions as that in *Sebastian v. Hadacheck*,[29] decided by the Supreme Court in 1915. There a city ordinance prohibiting the operation of brickyards in residential districts reduced the value of the plaintiff's brickyard from $800,000 to $60,000. The ordinance was upheld as a valid regulatory measure requiring no compensation. The Court said, ". . . It may . . . seem harsh . . . but the imperative necessity for its [the regulation] existence precludes any limitation upon it when not exerted arbitrarily. A vested interest cannot be asserted against it because of conditions once obtaining. . . ."[30] The decision is in harmony with neither the test of substantial reduction in value nor that of interference with vested rights, unless the prohibition of brickyards is considered more necessary than the operation of military aircraft, or unless the power of the state as against the due process clause exceeds that of the Federal Government as against the Fifth Admendment. Whether the decision in the *Hadacheck* case would be supported on the same facts today is questionable.

The problem of compensation in airport zoning has been compared to that of giving relief to property owners who have suffered damage as a result of federal action taken to clear and protect navigable waters. In those cases the establishment of public easements and structures either required the demolition of existing structures or rights, or prevented access to deep water by riparian owners. The analogy asserted is that between the federally established paths of flight for air traffic and the channels in navigable waters whose obstruction by adjoining owners was prohibited. The analogy is appealing; the difficulty is that the cases do not help a great deal in deciding when compensation must be paid.

There is a significant line of cases which refuse compensation to riparian owners against federally asserted power. In *Scranton v. Wheeler*[31] compensation was unnecessary where the owner was denied access to navigable water by the construction of a pier, even though, by local law, the land was his to the middle of the stream. Also, where the activities resulted in a flooding of a claimant's land, no relief was allowed.[32] In *Greenleaf-Johnson Lumber Co. v. Garrison*[33] the Secretary of War was authorized to draw a harbor line as the limit of construction. The plaintiff built a pier out to the line established. Later the line was moved closer to shore, and the plaintiff's pier was removed without compensation.

Another line of cases has found compensation necessary in strikingly similar circumstances. In *Monongahela Navigation Co. v. United States*[34] the government had purchased for use the locks and dams of the plaintiff but had excluded from the purchase price the value of the right to take tolls. The Supreme Court required compensation for this right. A distinction may be made in that the property was to be used in the same form as held by the plaintiff, but later cases have not articulated this point. In *Portsmouth Co. v. United States*[35] an easement was found to have been impressed upon the property of the claimant by the firing of coastal defense guns across his land, and compensation for the loss was required.

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[29] 239 U.S. 394 (1915).

[30] *Id.* at 410.

[31] 179 U.S. 141 (1900). A like result obtained where a dike cut of plaintiff's use of a landing. Gibson v. United States, 166 U.S. 269 (1895).

[32] Bedford v. United States, 192 U.S. 217 (1913). Similar results where a lighthouse was built on submerged land belonging to the plaintiff. Chappel v. Butterworth, 39 Fed. 77 (C.C.D. Md. 1889).

[33] 237 U.S. 251 (1915).

[34] 148 U.S. 312 (1893).

[35] 260 U.S. 327 (1922).

Which line of authority will prevail seems impossible to predict. Suffice it to be said that regulation requiring the removal of existing structures and prohibiting the erection of future structures above certain levels presents a significant danger that, in many case, "taking" will be found and compensation required. S. 3129 recognizes the problem and provides machinery by which an aggrieved property owner may appeal to the Secretary of Commerce and seek compensation. If a taking is found to have occurred, compensation will be granted.

### Policy Objections to Federal Zoning of Land Use

The prospect of the Federal Government controlling the nature of the occupancy of land about an airport presents not only seemingly insurmountable constitutional difficulties but practical objections as well. As we have just seen, whether such regulation would require compensation in any or all cases is not entirely clear. It is likely that it will do so in many situations. The financial problem is apparent. Since 1946, Congress, under the Federal Airport Act,[36] has appropriated only $169 million for airport improvement out of an authorized $500 million.[37] If this is any indication of the amounts available for such projects, it can hardly be expected that there would be enough available for the purchase of rights in huge tracts of land, much of it in metropolitan areas.

Another disquieting prospect is the flood of litigation that would result from regulation of the land use. Each aggrieved landowner would have to be given his day in court,[38] and the proposed bill provides an avenue for the determination of the fact of taking and the amount. And, once the possibility of compensation under some circumstances is admitted, summary treatment cannot be given to the great bulk of cases, as the present use of each tract of land may be dissimilar and present a unique problem. Due process might well run amok.

Perhaps the most significant objection to the use of federal zoning to protect the neighboring citizens is that it is largely unnecessary. The danger is principally a product of newspaper sensationalism. From 1946 through the summer of 1952 there was one accident causing death to a person on the ground for every 4,000,000 landings and take-offs on scheduled and non-scheduled airlines. "Even bicycles kill more innocent bystanders annually than airplanes."[39] Such a substantial interference with the property interests of landowners can hardly be justified on the basis of such slight danger. It is the air traffic that is in jeopardy and needs protection, and it is to that area alone that legislative efforts should be directed. The needed reforms should not be tied to an unconstitutional scheme which may vitiate the whole plan.

### Suggestions and Conclusion

If the provision permitting federal control of land *use* were removed from the bill, S. 3129 of the 82nd Congress, the proposed legislation would appear as an intelligent solution to the problem. It would make available to the Civil Aeronautics Administrator the new weapon of eminent domain with which to eliminate existing obstructions where the owner is unwilling to do so himself and the state is unwilling to compel him. The use of eminent

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[36] 49 U.S.C. §1101 (1946).

[37] Report of the President's Airport Commission, *op. cit. supra* note 14, at 94.

[38] The question of compensation is ". . . always open to interested parties to contend." Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922).

[39] Report of the President's Airport Commission, *op. cit. supra* note 14, at 53.

domain would suffice to remove odds and ends of buildings, towers, trees, and poles which have plagued so many of our airports. The cost would not seem too great. Most of the obstructions are single objects whose lowering or complete removal can be effected quite simply. The Administrator would probably not attempt wholesale removal of groups of buildings, for his funds are restricted to "the limits of available appropriations."[40]

The use of the zoning power would be limited to the prohibition of future obstructions. Its exercise would raise fewer questions of constitutionality, and it is unlikely that any taking would be found, except, possibly, in the areas within a few hundred yards of the ends of the runways. Litigation would be infrequent, and except where the owner showed a projected industrial use, it would seem that the courts could create a rule of thumb for disposing of cases. For example, if the height limit were above thirty-five or forty feet,[41] it could be assumed that there was no taking of residential property; and if the height set were below this level, there would be a question for the court to decide whether projected building plans of the owner would be substantially frustrated.

The use of federal power should be tempered and kept in reserve, however, as it has been in the past. The bulk of the work should be given to the states when they are willing to accept it. Under the Federal Airport Act of 1946[42] which created a grant-in-aid program of airport development, the national government can withhold federal funds from state projects until adequate assurance of proper zoning and removal of obstructions is had. This has been the practice of the Civil Aeronautics Administration in the past and has been in part successful, though limited by lack of funds.[43]

The states have also cooperated in the past by joining with the federal agencies in drafting model state airport zoning acts and municipal airport acts.[44] Practically all states now have passed enabling acts based on the model acts which give the necessary zoning power to the municipalities. The local groups have, however, often shown themselves reluctant to take the steps necessary to give adequate protection to airport operations. Broadening the federal power may have the desired effect of stimulating the municipalities to act to insure the safety of their airports by proper zoning and removal of obstructions before the problem is taken from their hands.

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# DIGEST OF RECENT CASES

## RES IPSA LOQUITUR — APPLICABILITY UNDER MISSOURI LAW

*Cudney v. Midcontinent Airlines,*
254 S.W. 2d 662 (Mo. Sup. Ct. Feb. 9, 1953)

Plaintiff brought an action against the Airlines and the pilot of the plane on which she was a passenger, for injuries sustained when she was thrown from her seat by a sudden dropping, jerking, and jolting of the plane while

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[40] S. 3129, 82d Cong. 2d Sess., §1308 (1952).

[41] In a draft bill prepared by the CAA, from which much of S 3129 seems to have been taken, the power of the Administrator to limit building heights would commence only at the 35 foot level.

[42] 49 U.S.C. §1101 *et seq.* (1946).

[43] Interview with Mr. John Hunter, CAA Counsel, Division of Airports.

[44] See Department of Justice Reprint of "Suggested State Legislation, Program for 1947" (including Municipal Airports Act, State Airport Zoning Act, and Airport Condemnation Amendment). These acts were prepared by the cooperative efforts of the CAA, the Department of Justice, and the Council of State Governments.

in flight. It was shown during the trial that the cause of this dropping, jerking and jolting was the result of the plane hitting a downdraft which neither the company nor the pilot could anticipate. Plaintiff's case was primarily based on an allegation of the doctrine of *res ispa loquitur*, on the theory that the airplane was in the sole and exclusive control of the defendants, who possess superior knowledge or superior means of information as to the cause of the occurrence, and that the injury which plaintiff suffered would not have ordinarily happened if those in charge had used due care. The Supreme Court of Missouri, in this, a case of first impression, held that on the facts and conditions as alleged the doctrine of *res ipsa loquitur* is inapplicable.

### EVIDENCE — PRIVILEGE — JUDICIAL POWER — MILITARY PLANE CRASH — PRODUCTION OF REPORT OF OFFICIAL CRASH INVESTIGATION

*United States v. Reynolds*,
73 Sup. Ct. 528 (March 9, 1953)

This is an action under the Federal Tort Claims Act arising out of a military plane crash in which several civilian observers were killed. During the course of the trial the government had refused to produce the report of the official crash investigation, on the grounds that under 5 U.S.C. §22 (1946) it is within the sole province of the Secretary of the Air Force to determine whether there is privileged material in such report, and that the Secretary had determined that the policy of insuring collection of all pertinent information regarding aircraft accidents in order to maximize the promotion of flying safety, requires that such reports should not be released for use in litigation. The opinion of the Court of Appeals for the Third Circuit, denying this defense, is digested at 19 J. AIR L. & C. 114 (1951). The court there held that upon such motion it is proper for the district court to look into the facts and determine whether or not it was necessary for such a privilege to lie.

The United States Supreme Court has reversed the holding of the Appellate Court. In an opinion by the Chief Justice for a divided court (6-3) it was held that when a formal claim of privilege for an Air Force report of an accident is filed by the Secretary of the Air Force, under circumstances indicating a reasonable possibility that military secrets were involved, there is a sufficient showing of privilege to cut off any further demand for production of said report. The case was remanded to the district court for further proceedings.

### ACCORD AND SATISFACTION — EFFECT OF PROCEEDING BEFORE CAB ON LIABILITY OF CORPORATE OFFICERS FOR IMPROPER USE OF CORPORATE FUNDS

*Colonial Airlines, Inc. v. Janas*,
202 F. 2d 914 (2d Cir. March 16, 1953)

Plaintiff corporation brought this action against certain of its officers to recover damages for alleged defalcations and diversions of corporate funds. Defendants based their answer on an alleged accord and satisfaction arising out of a prior proceeding before the Civil Aeronautics Board in which the Board had issued a cease and desist order requiring defendants to refrain from further violations of the Civil Aeronautics Act and the Board's Economic Regulations and Uniform System of Accounts for Air Carriers. The order was based on substantially the same facts as the complaint in this case, and had incorporated by reference the terms of an

agreement whereby defendant was required to resign as an officer and pay plaintiff $75,000. The district court granted defendant's motion to dismiss the complaint. The Court of Appeals reversed, holding that while views of the Board might be given consideration in determining the existence of an accord and satisfaction, there must be sufficient evidence as to the intent of the parties to create such, and the determination of the Board in that regard is not conclusive even though payments were made and accepted pursuant to that order.

LIBEL — REPORT CONCERNING PILOT'S QUALIFICATIONS — QUALIFIED PRIVILEGE

*Johns v. Associated Aviation Underwriters,*
203 F. 2d 208 (5 Cir. April 3, 1953)

Airline pilot brought this action for alleged libel arising out of a report promulgated by the defendant association concerning his qualifications as a flier. The plaintiff alleged that he lost his job as a pilot as the result of libelous statements in a report made to his former employer by the association, which had made said report after an investigation arising out of the request of the employer for insurance. The district court had directed a verdict for the defendant. The Court of Appeals affirmed, holding that such a report qualifiedly privileged, and that no action for libel could arise out of it in the absence of a showing of malice.

WRONGFUL DEATH ACTION — NONRESIDENT AIRCRAFT — SERVICE OF PROCESS

*Peters v. Robin Airlines,*
3 Avi. 18,148 (N.Y. Sup. Ct. App. Div. March 23, 1953)

Passenger who boarded airline in New York City was killed by crash of plane in California mountains. Survivors brought wrongful dealth action against the airline by service of process on New York Secretary of State, under state statute authorizing this. The lower court opinion held this service valid. See case digest at 20 J. AIR L. & C. 117 (1953). The Appellate Division has just reversed, holding the statute unconstitutional insofar as it is applicable to accidents or collisions which did not occur within or over the territorial limits of the state or which had no causal connection to acts within or over said limits.

FEDERAL REGULATION OF AIR COMMERCE — ACCIDENT RESULTING FROM NEGLIGENCE OF PUBLIC AIRPORT PERSONNEL — WAIVER OF GOVERNMENT IMMUNITY FROM WRONGFUL DEATH ACTIONS

*Union Trust Co. v. United States,*
3 Avi. 18,177 (D.D.C. May 5, 1953)

Actions were brought against the United States for wrongful deaths of certain individuals as the result of an air collision in the vicinity of the Washington National Airport. Deceased had been passengers of a commercial airline, and the accident is alleged to have been caused by the negligence of agents of the government who were operating the airport. The United States District Court for the District of Columbia held that where the government has taken upon itself the regulation of air commerce and the responsibility of regulating the flow of traffic at a public airport, and any injury or death results as a consequence of the negligence of its servants or agents in so doing, the immunity of the government from legal

actions is waived under the Federal Tort Claims Act. Thus, where the collision of a scheduled air carrier and a military aircraft was due to the negligence of the control tower personnel at a public airport the government is liable for damages for wrongful deaths resulting from the accident.

## INJURY OF CHILD BY RUNAWAY HORSE — LOW FLYING AIRCRAFT AS CAUSE — LIABILITY OF OWNER OF AIRCRAFT

*Hoebee v. Howe,*
3 Avi. 18,186 (N.H. Sup. Ct. May 5, 1953)

Plaintiff's minor child was injured by a runaway horse. The horse had been frightened and caused to runaway by a low-flying airplane owned by defendant, and being operated by a student who had rented it. The plane was at the time flying below the minimum altitudes allowed by both state and federal statutes. The Supreme Court of New Hampshire held the owner of the plane liable for the injury thus caused. They said that both the state and the federal statutes place liability on the owner, whether he is in control or not, when the plane is operated in some manner which violates other provisions of the statutes or the regulations thereunder.

## AIR FREIGHT CARRIER — INTERPRETATION OF PROVISION OF CIVIL AERONAUTICS ACT AUTHORIZING CHARTER TRIPS AND SPECIAL SERVICES

*Flying Tiger Line, Inc. v. Civil Aeronautics Board,*
21 U.S.L. Week 2545, 3 Avi. 18,190 (D.C. Cir. May 7, 1953)

Plaintiff carrier is certificated to carry freight by air over a designated route under the provisions of section 401 of the Civil Aeronautics Act. It claims that under the last sentence of section 401 (f) of that statute, which reads, "Any air carrier may make charter trips or perform any other special service, without regard to the points named in its certificate, under regulations prescribed by the Board," it is authorized to carry passengers by charter or to perform any other special service between any points. The Court of Appeals for the District of Columbia has upheld a CAB determination that this sentence of the statute allows a carrier to make charter trips or perform any other special service without regard to the terminal points named in the certificate, but does not affect any limitation contained in the certificate with respect to the type of service to be rendered. Therefore it alone does not allow a carrier which is certified to carry freight to carry passengers.

## MERGER OF AIR CARRIERS — SUPERIORITY OF CAB RULING AS TO SENIORITY OF NEW PERSONNEL BEING INTEGRATED

*Kent v. Civil Aeronautics Board,*
21 U.S.L. WEEK 2561, 3 Avi. 18,194 (2d Cir. May 8, 1953).

The Court of Appeals for the Second Circuit has ruled that under section 408 (b) of the Civil Aeronautics Act, the CAB has jurisdiction to direct the integration of a merged airlines' employees into the surviving airline's seniority list by giving length of service with the merged airline the same effect as length of service with the surviving airline. The collective bargaining contract between the surviving carrier and the union bargaining agent of its employees must yield to the paramount power of the Board.

# BIBLIOGRAPHY

**Department Editor: Arthur G. Renstrom**

## CURRENT LITERATURE ON AVIATION

### BOOKS AND PAMPHLETS

AIR TOURING GUIDE TO EUROPE, 1953. London, Royal Aero Club Aviation Centre, 1953. 7s6d.

Bradley, Littleton, Jr. FILING MANUAL FOR AIRCRAFT CORRESPONDENCE. Normandy, Mo., The Author, 2328 Rockdale Ave., 1953. 264p. $5.50.

CIVIL AIR REGULATIONS AND REFERENCE GUIDE FOR A. AND E. MECHANICS. Rev. ed. Los Angeles, Aero Publishers, 1953. 120p. $2.00.

EMPLOYMENT OUTLOOK IN AIR TRANSPORTATION. Washington, U.S. Govt. Print. Office, 1953, pp. 435-456. (Labor Statistics Bureau. Bulletin 1128) $ .20.

Reprinted from the Occupational Outlook Handbook, 1951.

Grönfors, Kurt. OM TRAFIKSKADEANSVAR UTANFÖR KONTRAKTSFÖRHALLANDEN. Studier över skadeståndsproblem vid trafik till lands, till sjöss, och i luften. Stockholm, Almquist & Wicksell, 1952. 405p.

Doctoral dissertation.

Kamminga, M. S. THE AIRCRAFT COMMANDER IN COMMERCIAL AIR TRANSPORTATION. The Hague, Martinus Nijhoff, 1953. 184p. Guilders 10.

Discussion of the legal status of the aircraft commander in Dutch air law and proposals for an amplification of the ICAO draft convention on this subject.

Mayhill, S. Roger. A CRITIQUE OF THE C.A.A. STUDIES ON AIR TRAFFIC GENERATION IN THE UNITED STATES. Lafayette, Ind., Purdue University, The Author, 1953. 30p.

Starr, Edward A. THE TOOLS OF THE TRAFFIC MAN. Rev. ed. Dallas, The Transportation Press, 1952. 233p.

Discussion of the scope, purpose, and use of traffic publications. Includes several chapters on the air transport industry.

Taaffe, E. J. THE AIR PASSENGER HINTERLAND OF CHICAGO. Chicago, University of Chicago, Department of Geography, 1952. 161p.

Doctoral dissertation.

Transportation Association of America. SOUND TRANSPORTATION FOR THE NATIONAL WELFARE; a Report and Recommendations on National Transportation Policy. Chicago, The Association, 1953. 225p.

### PERIODICAL ARTICLES

*Air Cargo Round Table.* Air Transportation, Apr. 1953; 22:6-7, 30. Comments on Civil Aeronautics Board survey conclusion that air cargo traffic will triple its present volume.

*Air Warfare and Law* [Part II], by C. P. Phillips. George Washington Law Review, Mar. 1953; 21:395-422.

*Air Freight Prospects*: Promise of Tremendous Future Expansion, by R. A. Norden. Commercial and Financial Chronicle, Apr. 1953; 177:1536.

*Air Traffic Control Today and Tomorrow*, by V. A. M. Hunt. Royal Aeronautical Society Journal, May 1953; 57:301-317.

*Airlines and Helicopters;* Fruitful I.A.T.A. Symposium. Modern Transport, May 16; 69:12.

Report on helicopter symposium held as a part of the 6th technical conference of the International Air Transport Association in Puerto Rico.

*Annual Air Transport Progress Issue.* American Aviation, Apr. 27, 1953; 16:39-156.

*The Atlantic Three*, by Peter Berry. Aeronautics, Mar. 1953; 28:36-38.

Discussion of relative merits of Lockheed Constellation, Boeing Stratocruiser, and Douglas DC-6 for North Atlantic services.

*Aviation in South-East Asia and the South Pacific;* ICAO-Conference Report, by John Loughlin. Airports and Air Transportation, Mar./Apr. 1953; 6:154-155, 161.

Summary of regional ICAO aviation conference held at Melbourne, Australia.

*Business Builds Air Fleet*, by Howard F. Weeks. Dun's Review, Apr. 1953; 25-26, 60-69.

Survey of current use of company-owned aircraft for business purposes.

*C.A.B. Regulation a Stabilizing Factor*, by J. H. Lewis. Trusts and Estates, May 1953; 92:341-344.

*Civil Aeronautics Act—CAB Retroactively Invalidates 30-Day Notice Provision Raised as Defense in Pending Action for Personal Injuries.* Harvard Law Review, May 1953; 66:1311-1312.

Recent case note.

*Candid Case History; From Failure to Success*, by J. E. V. Tryzack. Manager, Jan. 1953; 21:20-25, 33.

Presents results of an industrial relations program carried out by British European Airways.

*Civil Aviation Administration; Problems in New States; the Need for Exchange of Experience*, by Victor L. G. Gore. Flight, May 8, 1953; 63:574-575.

Comparative study of government aviation organization patterns in Denmark, Israel, Netherlands, Norway and Sweden.

*Common Carriers: Aviation: Filed Tariff Exemption From Liability Under the Civil Aeronautics Act*, by Theodore E. Munson. Cornell Law Quarterly, Winter Issue 1953; 38:220-228.

Case note on Lichten vs. Eastern Airlines, Inc.

*Commonwealth Air Transport; Thirty-Four Years of Development.* Modern Transport, May 30, 1953; 69:5, 36.

Coronation issue article.

*Conflict in Jurisdictions in the Control of Airflight*, by John Augustine Eubank. U. S. Air Services, May 1953; 38:14-16.

Discussion of jurisdictional conflicts arising between federal and local governments in airspace below an altitude of 1,000 feet with author's recommendations for preventing such conflicts.

*Contract Cargo Flies the Caribbean*, by Herbert Olden. Aviation Age, May 1953; 19:32-35.

Account of the operations of Rutas Aereas Nacionales, S.A. between Miami, Fla. and Caracas, Venezuela.

*German Aviation on the Way.* Interavia; Review of World Aviation, No. 5, 1953; 8:250-251.

*The Impact of Cargo on Air Transport Planning.* Interavia; Review of World Aviation, No. 5, 1953; 8:252-255.

Based on Lockheed Aircraft Corporation study entitled "Air Cargo Trends in the United States."

*Interchange Makes Money for Continental,* by James H. Winchester. Aviation Age, Apr. 1953; 19:24-26.

*Jet Airline Anniversary; B.O.A.C.'s Progress in Twelve Months of Comet Operations.* Flight, May 1, 1953; 63:545-546.

*Jet Airliners; Year of Decision,* by John J. McDonald. Fortune, Apr. 1953; 47:124-129, 242-248; May 1953; 47:128-131, 216-218.

*Land Damage Liability in Aircraft Cases,* by John A. Eubank. Dickinson Law Review, Mar. 1953; 57:188-197.

*Local Service Airlines; Trunkline Suspensions in Aid of the Local Service Experiment,* by Victor S. Netterville. Southern California Law Review, Apr. 1953; 26:229-264.

Discussion of the Civil Aeronautics Board action in the cases of Western Airlines v. Civil Aeronautics Board and United Airlines v. Civil Aeronautics Board and its role in the overall planning and operation of the airline industry.

*Low-Price Air Travel.* Extension of Remarks of Hon. John F. Kennedy. Congressional Record, May 20, 1953; 99:appendix A2911-A2912.

Address by Joseph P. Adams of the Civil Aeronautics Board, April 15, before the Oakland Chamber of Commerce.

*Our New Airliners; First Results of the New British Formula for Developing Civil Aircraft,* by S. Scott Hall. Aeronautics, Mar. 1953; 28:28-33.

*Pattern of Air Service Availability in the Eastern Hemisphere,* by G. Etzel Pearcy and Lewis M. Alexander. Economic Geography, Jan. 1953; 29:74-78.

*Personal Injury Suits Against Airlines,* by Samuel M. Lanoff. Chicago Bar Record, Feb. 1953; 34:213-214.

*Private Property Rights in the Air Space,* by Jack E. Richardson. Canadian Bar Review, Feb. 1953; 31:117-157.

Principally discussion of the English and Canadian law with citation of English cases.

*Revision of the Warsaw Convention,* by Gerard C. Bolla. ICAO Bulletin, Apr. 1953; 8:14-18.

Comparison of the proposed draft of a new convention with the provisions of the present Warsaw Convention.

*Sixteen Years of Air Transport; Years of Consolidation.* Aeroplane, May 29, 1953; 84:707-709.

Coronation issue with a survey of British air transport developments between the two coronations.

*Special Insurance Issue.* Air Transportation, Mar. 1953; 22:5-8, 29, 32.

Includes "Insuring Aircraft," by Gordon C. Sleeper, "Challenging the CAB's Insurance Rule," by Milton A. Cain, "An Insurance Underwriter Looks at Airfreight Risk," by G. DeWitt Holcomb, and "Savings in Insurance," by Arthur Hussy.

*Technical Trends in Air Transport*, by William Littlewood. Journal of the Aeronautical Sciences, Apr. 1953; 20:225-279.

The sixteenth Wright Brothers Lecture delivered December 17, 1952 in Washington.

*Transportation Law: Aviation*, by Arnold W. Knauth. New York University Law Review, Feb. 1953; 28:387-415.

Annual survey of American law for the year 1952.

*Transportation Policies of the Eisenhower Administration.* Extension of Remarks of Hon. Charles E. Potter. Congressional Record, May 7, 1953; 99:appendix A2585-A2587.

Address delivered by Robert B. Murray, Jr., Under Secretary of Commerce for Transportation, at meeting of the United States Chamber of Commerce, Washington, D. C., April 29, 1953. Includes discussion of Federal airport and airways program.

*Wage Determination for Airline Pilots*, by M. L. Kahn. Industrial and Relations Review, Apr. 1953; 6:317-336.

## FOREIGN ARTICLES

*La Convenzione di Chicago e la sua Tecnica*, di Amedeo Giannini. Rivista aeronautica, Apr. 1953; 29:269-271.

*Die Haftung Anderer Personen als des Luftfahrzeughalters für Schäden im Luftverkehr Nach Deutschen Recht*, von Alfred Wegerdt. Zeitschrift für Luftrecht, No. 2, 1953; 2:127-143.

*Das Lufttransportreglement vom 3. Oktober* 1952, von Werner Guldimann. Schweizerische juristen-zeitung, Mar. 15, 1953; 49:85-90.

*Zur Systematik des Luftrechts*, von Werner Guldimann. Zeitschrift für Luftrecht, No. 2, 1953; 2:144-157.